RIDGE

HOTEL AND CO-LIVING, HIGH STREET, UXBRIDGE

BREEAM PRE-ASSESSMENT REPORT

March 2024

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BREEAM PREASSESSMENT REPORT

March 2024

Prepared for

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VERSION CONTROL

VERSION	DATE	DESCRIPTION	CREATED BY	REVIEWED BY
1.0	21.03.24	First issue	SM	SS

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1. INTRODUCTION

Ridge and Partners LLP has been appointed to undertake a BREEAM pre-assessment for the proposed new development, comprising co-living and hotel accommodation on Uxbridge High Street, in the London Borough of Hillingdon.

DNA Uxbridge Ltd is targeting a minimum BREEAM rating of Excellent for both the Co-Living and Hotel. and these will be assessed under the BREEAM Version 6 New Construction schemes (Multi-residential for Co-Living & Other -Residential institution for the Hotel).

The purpose of this report is to identify the risks, opportunities and implications associated with targeting an Excellent rating and to provide the design team with information relating to the key actions that are to be carried out to ensure successful certification from the BRE.

The team should take cognisance of the information and guidance provided within this report and associated documentation, to assist them in ensuring that the design accounts for the full BREEAM requirements.

2. PROJECT DESCRIPTION

The proposed site is approximately 0.36ha and sits at the junction of Uxbridge High Street and Belmont Road.

The proposal comprises the demolition of the existing building on the site and erection of a 10-storey purpose-built co-living accommodation with 320 bedrooms and a 162 bedroom hotel. The floor areas are broken down as follows:

Co-Living:
- 7,008 sqm GIA for the co-living bedrooms
- 3,962sqm of flexible non-bedroom space

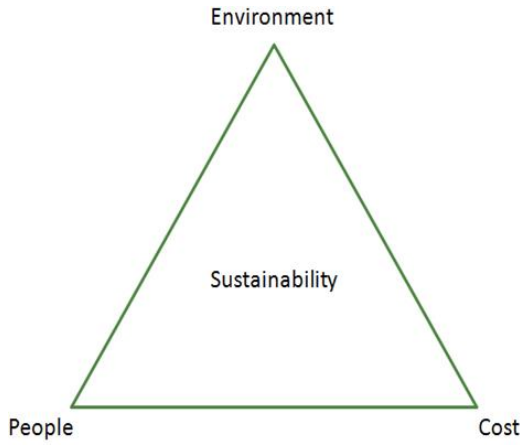
Hotel:
- 3,001 sqm GIA for the hotel bedrooms
- 2,009sqm of flexible non-bedroom space

3. PROJECT PROGRAMME

The project is currently in RIBA Stage 2, with planning permission to be submitted in March 2024. A contractor is yet to be engaged to construct the scheme; however the initial timeframe is a start on site proposed for August 2025, and completion in November 2027.

4. BACKGROUND TO SUSTAINABLE DESIGN & BREEAM

Sustainability is defined as the ability to meet the needs of today, without compromising the ability of future generations to provide for the needs of tomorrow. It can be described as the equilibrium between environmental and financial considerations, and the needs of the community. A truly sustainable development will achieve a balance between fitness-for-purpose, value-for-money and environmental impact and will achieve this via integration as part of a larger, sustainable community.



BREEAM (Building Research Establishment's Environmental Assessment Method) is a voluntary scheme that can be used to assess the environmental life cycle of new non-domestic buildings at the design and construction stages.

BREEAM assessments can be either undertaken in two stages: Firstly, the design stage, which leads to an Interim BREEAM certified rating; Secondly, the post construction stage, which leads to a final BREEAM certified rating or as a single Post Construction Assessment which leads to a final BREEAM certified rating.

Buildings are assessed using a system of credits. The credits are grouped within the following categories: Within each of the BREEAM categories outlined above, there are a number of credit requirements that reflect the options available to designers and managers of buildings.

An environmental weighting is applied to the scores achieved under each category, as shown in the table above, in order to calculate the final BREEAM score. The weighting factors have been derived from consensus-based research with various groups such as government, material suppliers and lobbyists. This research was carried out by BRE to establish the relative importance of each environmental issue. The weighting factors vary depending on whether the project is fully fitted, shell & core or shell only, and on the answers to a number of set up questions.

BREEAM Section	% Weighting (Fully Fitted)
Management	11.0%
Health and Wellbeing	14.0%
Energy	16.0%
Transport	10.0%
Water	7.0%
Materials	15.0%
Waste	6.0%
Land Use & Ecology	13.0%
Pollution	8.0%

The assessment process results in a report covering the issues assessed together with a formal certification giving a rating on a scale of PASS (at least 30%), GOOD (at least 45%), VERY GOOD (at least 55%), EXCELLENT (at least 70%) and OUTSTANDING (at least 85%).

A score of less than 30% is UNCLASSIFIED.

5. BREEAM STRATEGY & TARGETS

In line with DNA Uxbridge Ltd's ESG requirements, the project is targeting a minimum of a **BREEAM 'Excellent'** rating. The following report identifies a route-map towards achieving this target, including early actions which need to be achieved. The full pre-assessment tracker document for the assessments can be found in Appendix A. This document provides information on the requirements of the individual credits which make up the assessment.

In addition, a qualitative evaluation of risk associated with meeting the requirements of each credit has been made. Categorised as low, medium, or high, these risks are based on technical or financial challenges or design team's experience in discharging the requirements of each credit.

The current targeted 'Excellent' BREEAM score is **78.45%** (incl buffer of 8.45%) for the Co-Living assessment and **75.25%** (incl buffer of 5.25%) for the Hotel assessment. In all assessments we recommend a score buffer of between 5 and 7% to allow for unexpected changes or compliance issues as the project progresses.

Within the pre-assessment there may be issues which are outside of the current scope of works/specification. Attention must be paid to ALL credits listed within this report, to ensure the necessary measures required to achieve the associated credits are feasible, and if so, incorporated within specifications.

It is sometimes the case that achievement of a particular BREEAM credit comes with a disproportionately increased cost, without offering equivalent advantages in functionality or sustainability. We would recommend that any such issues are identified early and that these issues are only incorporated within the design once a cost-benefit analysis has been carried out.

It is important to build a robust strategy for the BREEAM certification process into the project programme to ensure that the client's requirements can be achieved. It is recommended that a 'managed' post construction assessment is undertaken. A single report will be submitted to the BRE following completion of the building, rather than a separate interim (design stage) and final (post construction) submission. This option provides a more streamlined approach to assessment. It has the benefit of continual assessment throughout the design and construction phases and allows changes to be picked up as they occur.

For the certification to be a smooth process for all concerned, a BREEAM progress report will be developed and regularly updated through the project, along with the production of an Information Required Schedule (IRS). These documents will track the progress of the assessment throughout the evolving design and construction process and will break down all the information required to support the assessment, by discipline, giving timeframes for when this information should be provided to the assessor.

It is by this approach that we ensure a constant flow of information and avoid credit time deadlines being missed and the BREEAM rating jeopardised.

6. TIME DEPENDENT ACTIONS

There are various key actions that include time specific requirements to allow the relevant credit to be achieved. The time dependent actions associated with the targeted credits are listed in Table 1.

Table 1. Time Dependent Actions

Credit		Time requirements	Responsibility
RIBA Stage 1			
Mat 03 Req 2	Enabling Sustainable Procurement	A Sustainable procurement plan is produced by the client and used by the design team to guide specification towards sustainable construction products from RIBA Stage 1 onwards	DNA Uxbridge

Credit		Time requirements	Responsibility
RIBA Stage 2			
Man 01 Req 1-3	Project Delivery Planning	Prior to the end of RIBA Stage 2 all the project delivery stakeholders will meet, identify, and define roles, responsibilities & contributions during each key phase.	Savills/ Design team
Man 01 Req 9	BREEAM AP (Concept Design)	A BREEAM Accredited Professional (AP) is Appointed as BREEAM AP During RIBA Stage 1/ 2	Savills/Ridge (Sust) - where appointed
Man 02 Req 1-3	Elemental Life Cycle Cost	A competent person carries out an elemental life cycle costing analysis prior to the end of RIBA Stage 2, together with elemental options appraisals in accordance with PD 156865:2008. The LCC should show future replacement costs over 20, 30, 50 or 60 years and include service life, maintenance and operation cost estimates and be used to influence design and specification.	LCC Consultant
Hea 06 Req 1-3	Security of Site and Building	Prior to the end of RIBA Stage 2, a Security Needs Assessment (SNA) must be undertaken by a suitably qualified security specialist and any recommendations are implemented.	CGL
Ene 04 Req 1 - 4	Passive Design Analysis (PDA)	A Passive Design Analysis is undertaken during Concept Design (RIBA Stage 2) & implementation of passive design solutions that reduce demands for energy consuming building services	Ridge (M&E) / M&E Sub

Credit		Time requirements	Responsibility
Ene 04 Req 9-12	Low Zero Carbon Feasibility Study	Prior to the end of RIBA Stage 2, an energy specialist must produce a BREEAM compliant Low Zero Carbon feasibility study. (A LZC technology must be implemented in line with the findings of the study which reduces CO^2 emissions)	Ridge (M&E) / M&E Sub
Tra 01 / Tra 02 Prerequisite	Transport Assessment & Travel Plan	Requires that during Concept Design Stage (RIBA Stage 2) that a BREEAM compliant Transport Assessment and draft travel plan will be produced.	Caneparo
Mat 01 Req 3-5	Life Cycle Assessment - Superstructure	An IMPACT equivalent Life Cycle Assessment (LCA) is carried out at RIBA Stage 2 considering LCA options for 4 substantially different superstructure elements.	Project Team / Ridge (Sust)
Mat 01 Req 6-7	Life Cycle Assessment - Substructure & Hard Landscaping	An IMPACT equivalent Life Cycle Assessment (LCA) will be carried out at RIBA Stage 2 and consider LCA options for 6 substantially different substructure or hard landscaping elements (at least 2 sub / 2 HL)	Project Team / Ridge (Sust)
Wst 01	Pre-demolition audit	Carry out 'Pre Demolition Audit'	Savills
Wst 05	Adaption to Climate Change	Requires production of a Climate Change Adaptation Strategy Appraisal using a risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. And to develop recommendations to mitigate the identified impact before the end of RIBA Stage 2.	CGL (with Ridge M&E input)
Wst 06 Req 1-2, Req 3-5	Design for disassembly and adaptability - Recommendations	Requires production of a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design (RIBA Stage 2) and to develop recommendations or solutions based on the study that aim to enable and facilitate disassembly and functional adaptation.	CGL (with Ridge M&E input)
LE 02 Req 4-6	Ecological Survey & Evaluation	A Suitably Qualified Ecologist (SQE) must carry out a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions.	Arbtech

Credit		Time requirements	Responsibility
LE 02 Req 7-10	Determining Ecological Outcome	Requires that pre-planning, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the site & project, and optimal ecological outcomes for the site are selected after liaising with representative stakeholders and the project team.	Savills / Project Team / Arbtech
LE03 Req 2-4	Managing negative impacts on ecology - Planning, Liaison, Implementation & Data	RIBA Stage 2- define & allocate the roles and responsibilities to support successful delivery of project outcomes and consider site preparation and construction works to optimise benefits and outputs.	Savills / Project Team / Arbtech
RIBA Stage 3-4			
Man 01 Req 11-12	BREEAM AP (Developed Design)	An Appointed BREEAM AP works with the Project team to consider links between BREEAM Issues and assist in maximising the project's overall performance against BREEAM Throughout Developed Design / RIBA Stage 3	DNA / Ridge (Sust) - where appointed
Man 02 Req 4-5	Component Level LCC Plan	Prior to the end of RIBA Stage 4, a competent person carries out an LCC, which is used to influence design and specification.	DNA
Man 03 Req 6	BREEAM AP (Site)	For RIBA Stages 4-6, the BREEAM AP works with the project team to consider links between BREEAM Issues and assist them in achieving the project's performance targets throughout Construction, Handover, and Close Out stages.	DNA / Ridge (Sust) - where appointed
Ene 01 Req 3-5	Energy Modelling and Reporting	Undertake TM54 compliant modelling to predict energy consumption and determine factors that can impact consumption. The initial stage of modelling should be carried out at the design stages, with a repeat of the modelling at post construction stage using more accurate inputs. In addition to complying with the TM54 requirements, it needs to be demonstrated that the modelling has led to a substantial improvement in operational energy performance (i.e., the early modelling identified possible improvements in operational function that have been implemented).	Ridge (M&E) / M&E Sub

Credit		Time requirements	Responsibility
Mat 01 Req 3-5	Life Cycle Assessment - Superstructure	Requires Life Cycle Assessment of superstructure options which is third party verified during RIBA Stage 4.	Project Team / DNA / Ridge (Sust) – where appointed
Wst 05	Adaption to Climate Change	Requires that an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor	CGL / Ridge (M&E) / Edge
Wst 06	Design for disassembly and adaptability - Implementation	Requires that an update, during Technical Design (Stage 4), on how the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective and that omissions have been justified.	CGL / Ridge (M&E) / Edge

7. KEY ISSUES TO ACHIEVE AN 'EXCELLENT' CERTIFICATION

Target scores of **78.45% and 75.25%** for the Co-Living and Hotel respectively, have been identified within the pre-assessment, which would achieve an 'Excellent' rating, with a reasonable margin of safety. This route-map can be found in Appendix A and provides detail on those issues targeted, assumptions made and opportunities to enhance the BREEAM score further where additional 'possible' credits are targeted.

The tables within the following pages provide a brief summary of the issues required to achieve the rating. These should be read in conjunction with Appendix A and the current BRE Manual which provides more detail on the requirements. Please note not all items are listed below.

7.1.1. DNA / Savills Issues

Table 2 – Client / Project Manager Issues

Credit		Requirements
Man 01 Req 1-3	Project Delivery Planning	Prior to the end of RIBA Stage 2 ensure all the project delivery stakeholders (client/developer, contractor, design team) meet, identify and define roles, responsibilities & contributions during each key phase. The project team demonstrates how the stakeholder contributions and consultation process influences the following: Initial Project Brief; Communications Strategy; Project Execution Plan; Concept Design.
Man 01 Req 8	Pre-requisite BREEAM AP	It is assumed that the project team and client formally agree (contract or letters of appointment) strategic performance targets, including the BREEAM rating, early in the design process.
Man 01 Req 9	BREEAM AP (Concept Design)	A BREEAM Accredited Professional (AP) is appointed as BREEAM AP During RIBA Stage 1-2

Credit		Requirements
Man 01 Req 11-12	BREEAM AP (Developed Design)	An appointed BREEAM AP works with the team to consider links between BREEAM Issues and help maximise the project's overall performance against BREEAM through RIBA Stage 3
Man 02 Req 1-5	Life Cycle Costing (LCC)	Requires appointment of cost consultant to carry out Stage 2 & 4 LCC. Requires capital cost input to allow the study to be completed
Man 02 Req 6	Capital Cost Reporting	Report the capital cost for the building in £k/m2 to the Assessor for reporting to the BRE
Hea 06 Req 1-3	Security of Site and Building	A Suitable Qualified Security Specialist conducts a Security Needs Assessment during concept design (RIBA Stage 2). The recommendations from this report are incorporated into the proposals and as-built development.
Mat 03 Req 2	Enabling Sustainable Procurement	A sustainable procurement plan was used by the design team to guide specification towards sustainable construction products before Concept Design **(RIBA Stage 1).**

7.1.2. Child Graddon Lewis Issues

Table 3 – Architectural Issues

Credit		Requirements
Hea 01 Req 1-3	Control of Glare from Sunlight	A glare control assessment is carried out to identify areas at risk from glare and justify areas not at risk and glare control is provided to appropriate areas, this should not result in increased energy consumption
Hea 07 Req 7	Outdoor Space	Ensure appropriate outdoor spaces are provided for use by building users, including street furniture, non-smoking restriction and in areas away from car parking and roads. Targeted for the Co-Living only.
Tra 02 Req 2	Sustainable Transport Measures	Implement relevant design measures, including appropriate cycle storage, core and new amenities (i.e., terraces, gym for PBSA).
Tra 02 Req 2	Sustainable Transport measures	Implement any relevant design measures including appropriate cycle storage for the Co-Living and new amenities (i.e., roof terraces, gym).
Mat 01 Req 3-7	Life Cycle Assessment	Provide assistance and relevant information to enable Ridge to carry out Life Cycle Assessment at RIBA Stages 2 and 4.
Mat 05	Designing for Durability and Resilience	Building designed to incorporate suitable durability protection measures to prevent damage to vulnerable areas internally and externally.

Credit		Requirements
		Building designed to limit long and short-term degradation due to environmental factors (requires a Material Degradation Study report).
Wst 03 Req 1	Operational Waste	A dedicated recycling area, adequately sized to serve the development and accessible to building occupiers and waste contractors will be provided. This space will be sized to meet the client's requirements (as a guide 2m² per 1000m² net floor area).
Wst 05	Adaption to Climate Change	Produce a study into the effects, risks and mitigation strategies for accommodating Climate Change during Concept Design, RIBA Stage 2 & updated at RIBA Stage 4.
Wst 06	Functional Adaptability & Design for disassembly	Produce a compliant 'Design for Disassembly and Functional Adaptation Study' during Concept Design (RIBA Stage 2) that is updated and implemented at RIBA Stage 4.
LE 01 Req 1	Previously developed land	Provide existing and proposed site plans which show the level of overlap between the existing and proposed buildings, confirming whether at least 75% of the new development is on land previously developed. (i.e., occupied by buildings or hard landscaping)

7.1.3. Ecologist and Landscape Architect Issues

Table 4– Ecologist's and Landscape Architect's Issues

Credit		Requirements
Hea 07 Req 7	Outside Space	Requires an appropriately sized outside space to be provided for building users with an external amenity area that is landscaped, open to the sky, is non-smoking and away from areas of noise pollution. This is currently only applicable to the co-living assessment.
Wat 04	Water Efficient Equipment	Confirm that all external landscaping and planting will rely solely on precipitation, during all seasons of the year with drought tolerant species specified.
LE 02, 03, 04 & 05	Pre-requisite	Requires confirmation of compliance against all relevant UK and EU or international legislation relating to the ecology of the site.
LE 02 Req 4-6	Ecological Survey & Evaluation	Requires that pre-planning, a suitably qualified ecologist produces a survey and evaluation report to determine the ecological baseline of the site and that data is collated and shared with project team to inform the site preparation, design or construction works.
LE 02- LE 05	Land use and Ecology	Requires attendance at coordination environmental workshops to discuss ecological issues associated with the design, construction, maintenance and ongoing use of the landscape and to agree ecological outcomes and roles and responsibilities and consultations. and completion of GN40 with supporting evidence.
LE 03 Req 8	Managing negative impacts of the project	Requires input into demonstrating loss of ecological value **has been minimised (1no. credit)**, as a result from development, and site preparation and construction works have been managed according to the hierarchy (see LE 02).
LE 04 Req 4-5	Ecological Enhancement	Requires that in addition collaboration with representative stakeholders, where potentially valuable, data is provided to the local environmental records centres nearest to, or relevant for, the site.
LE 04 Req 6	Enhancement of ecology	Requires calculations to show change in biodiversity of greater than 75% using the BREEAM Ecology Calculator or greater than -24% using the DEFRA BNG metric.
LE 05 Req 3-4	Management and Maintenance	Requires input into identifying measures to manage/maintain ecology throughout project and input into end user info on Ecology & Biodiversity covering local ecological features, value & biodiversity on or near site.

7.1.4. Acoustician Issues

Table 7. Acoustician Issues

Credit		Requirements
Hea 05 Req 3a	Sound insulation –	Airborne sound insulation values are at least 5 dB higher and impact sound insulation values are at least 5 dB lower than the performance standards in the relevant building regulations or standards. If more than 5% of assessed building's floor area includes non-residential area, these must comply with the following: The sound insulation between rooms and other occupied areas complies with the performance criteria given in Section 7 of BS 8233:2014. , Pre-completion testing is required to confirm.
Hea 05 Req 3b	Indoor Ambient Noise Level	The indoor ambient noise levels within residential areas (and any non-residential area where these comprise more than 5% of the floor area) will comply with the ranges stated in section 7 of BS8233:2014 will be achieved and verified by site testing.
Hea 05 Req 3c	Room Acoustics	Within residential and common spaces of the building, the spaces will achieve the requirements relating to sound absorption described in the relevant building regulations or building standards national guidance and will be verified by site inspection. If more than 5% of assessed building's floor area includes non-residential area, these must comply with the following: Achieve the requirements relating to sound absorption and reverberation times, where applicable, set out in Section 7 of BS 8233:2014
Pol 05	Reduction of Noise Pollution	A noise impact assessment in compliance with BS 4142:2014 will be carried out by a suitably qualified acoustician. The noise breakout from plant is confirmed to be 5dB lower at the nearest noise sensitive receptor than the recorded background noise levels throughout the day and night.

7.1.5. Transport Consultant Issues

Table 9. Transport Consultant Issues

Credit		Requirements
Tra 01	Transport Assessment and Travel Plan	Undertake a Transport Assessment and produce a draft Travel Plan before the end of Concept Design to inform the evolving design and optimise the opportunity to incorporate sustainable transport initiatives and issue a final travel plan during the design stages.

7.1.6. Ridge M&E and M&E Subcontractor Issues

Table 8 – Building Services Consultant and Subcontractor's Issues

Credit		Requirements
Man 04 Req 1 - 5	Commissioning - Testing Schedule and Responsibilities	Ensure commissioning is undertaken in accordance with all relevant CIBSE / BSRIA Codes and Guides, including the BMS
Man 04 Req 6 - 7	Commissioning - Design and Preparation	Ensure an appropriate team member (or specialist commissioning manager for complex systems) is appointed to design reviews, provide commissioning management input and manage commissioning performance testing and handover / post-handover stages.
Hea 01 Req 8-14	Internal and External Lighting Levels, Zoning & Control	For Internal lighting: - Designed in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012. - Areas with computer screens complies with CIBSE Lighting Guide 7 sections 2.4, 2.13 - 2.15, 2.20 and 6.10 - 6.20. - Areas are zoned and controlled appropriate for their use and location For External lighting: - Areas within the construction zone comply with BS5489-1:2013 & BS12464-2:2014 Part 2.
Hea 04 Req 1 - 4	Thermal Modelling	Requires that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11, demonstrating that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5.
Hea 04 Req 5 - 8	Design for Future Thermal Comfort	Requires dynamic thermal modelling to be undertaken demonstrates compliance for the above criteria when run for a projected climate change environment.
Hea 04 Req 9-11	Thermal Zoning and Controls	Requires that a temperature control strategy is developed, informed by the thermal model, providing compliant levels of zoning and control.
Ene 01 Req 1	Energy Performance	Ensure an Energy Performance Ratio of **0.6** or greater will be achieved, to gain **6no** credit.
Ene 01 Req 2-9	Energy Modelling and Reporting	Requires a CIBSE TM54:2022 compliant operational energy assessment:, including modelling to predict the building energy consumption, sensitivity analysis, and scenario modelling. Use findings to improve design of the building and determine an energy target for the building based on the results of the scenario modelling. Repeat scenario modelling post construction to reflect as built specification and, if necessary, adjust the energy target. Demonstrate that operational energy performance has been substantially improved

Credit		Requirements
Ene 02 Req 1-5	Submetering of Major energy consuming systems	Requires sub-meters to cover at least 90% of each fuel type and all substantial energy uses and relevant departments / tenancy areas (where relevant). Meters must be connected to a BMS or other energy management system. For the hotel, also requires energy sub-meters to cover a significant majority of the energy supply to relevant function areas / departments / tenancies within the building.
Ene 03	External lighting	Ensure that the average initial luminous efficacy of the external light fittings within the construction zone (including any existing fittings) is not less than 70 luminaire lumens per circuit Watt. All external lights have daylight sensors and PIRs in areas of intermittent pedestrian traffic.
Ene 04 Req 1-4	Passive Design Analysis (PDA)	A RIBA Stage 2 PDA is undertaken looking for opportunities to implement passive design solutions reducing energy demands. Solutions are implemented & reduce emissions & energy demand
Ene 04 Req 9-12	Low Zero Carbon (LZC) Feasibility Study	Prior to the end of RIBA Stage 2, an energy specialist must produce a BREEAM compliant LZC feasibility study. A LZC technology must be implemented in line with the findings of the study which reduces CO_2 emissions.
Wat 01	Water Consumption	Requires careful specification to limit the flush volume of toilets and urinals, the flow rate of taps, showers, and any other water consuming facilities (i.e., laundry, dishwashers).
Wat 02 Req 1-6	Water sub meters	Requires a pulsed water meter to the main water supply to the building and additional sub meters to each tenancy area and any other areas that have significant water usage (e.g. water tanks, laundry, café).
Wat 03 Req 3	Flow Control Devices	Requires flow control devices that regulate the water supply to staff / communal / public WC area or sanitary facilities to be installed in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework. Note: bedroom en-suites in the Co-Living block are excluded from the requirements, but en-suites in the hotel are not. Compliance for WC facilities in hotel rooms can be achieved through providing the required flow control devices to groups of 10 rooms, rather than to each individual room.
Wst 05	Adaption to Climate Change	Requires input into a study into the effects, risk and mitigation strategies for accommodating Climate Change during Concept Design (RIBA Stage 2) and reviewed at RIBA Stage 4.
Wst 06	Functional Adaptability	Requires input into a 'Design for Disassembly and Functional Adaptation Study' during Concept Design and reviewed at RIBA Stage 4.
LE 02 - LE 05	Land use and Ecology	May require attendance at coordination environmental workshops/discussions to discuss ecological issues associated with

Credit		Requirements
		the design, construction, maintenance, and ongoing use of the landscape.
Pol 02	Local Air Quality	Ensure that all space heat and hot water systems are electric only.
Pol 04	Reduction of Night-Time Light Pollution	Requires that all Illuminated advertisements comply with ILP PLG05 and all external lighting with Table 2 ILP:2011 Additionally, lighting can be automatically switched off between 23:00 and 07:00, excluding for safety and security lighting which complies with the lower lighting levels in Table 2 ILP:2011 Illuminated advertisements must be designed in compliance with ILP PLG05
Pol 05	Reduction of Noise Pollution	Requires plant to be specified in line with the noise impact assessment to ensure that the noise breakout from plant will be 5dB lower than the background noise level, throughout day and night

7.1.7. Civil and Structural Issues (Edge Consulting Engineers)

Table 9 - Civil and Structural Issues

Credit		Requirements
Mat 01	Environmental Impact	Requires provision of information to enable Life Cycle Assessment to be undertaken at RIBA Stage 2 and RIBA Stage 4.
Wst 05	Adaption to Climate Change	Requires input into a study into the effects, risk and mitigation strategies for accommodating Climate Change to the building fabric during Concept Design, RIBA Stage 2 and updated at RIBA Stage 4.
Wst 06	Functional Adaptability & Disassembly	Requires input into a compliant 'Design for Disassembly and Functional Adaptation Study' during Concept Design. RIBA Stage 2 updated at RIBA Stage 4.
LE 02 req 7-10	Determine Ecological Outcome	Requires input during design Stage 2 to liaise and collaborate with representative stakeholders to identify and consider ecological outcomes for the site and applying the mitigation hierarchy. (ie attend Stage 2,4 & 5 Environmental workshops)
LE 03 Req 3-4 LE 04 Req 4-5	Planning and measures on site	Requires input early enough to influence concept design and continued liaison and collaboration with stakeholders & in implementation of the selected solutions & measures during design, procurement, site preparation & construction to enhance the ecological value. (ie attend Stage 2,4 & 5 Environmental workshops)
Pol 03 req 1-2	Low Flood Risk	Requires a site-specific Flood Risk Assessment to confirm that the building is situated in a low flood risk area for the following: Fluvial; Tidal; Surface Water; Groundwater; Sewers; Reservoirs, canals or other artificial sources.
Pol 03 Req 5-8	Surface Water Run-Off rate	Requires an appropriate consultant to develop bespoke surface water run off solutions and requires Drainage Consultant to confirm and provide calculations & details showing that there will be no increase in the rate of run off from the site as a result of the development.

Credit		Requirement
Pol 03 Req 9-15	Surface Water Run-Off - Volume	Requires that flooding of the property will not occur in the event of local drainage system failure, the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development (allowing for climate change).

7.1.8. Main Contractor's Issues

Table 10 – Main Contractor's Issues

Credit		Requirements
Man 02 Req 4-5	Component Level LCC Plan	Provide Cost Consultant with information necessary to carry out Stage 4 LCC
Man 02 Req 1-3	Capital Cost Reporting	Report the capital cost for the building in £k/m2 to the Assessor for reporting to the BRE via the BREEAM Spreadsheet
Man 03 Req 1-18	Responsible Construction Practices	Requires that any party, who at any stage, manages the construction site: - Uses Legally harvested and traded timber'. - Operates a third-party certified EMS (e.g., ISO 14001) - Implements best practice pollution prevention policies. - Uses a BREEAM AP. - Achieves **39** in CCS with no section below **13** as well as providing additional evidence for site at handover, fleet operators training and accident reports. - Monitors and reports construction site energy and water consumption
Man 04 Req 1-5	Commissioning - Testing Schedule and Responsibilities	Appoint an appropriate team member to monitor and programme pre-commissioning, commissioning and testing. A schedule of commissioning is prepared, identifying appropriate timescales and standards e.g. CIBSE, BSRIA. Where a BMS is installed, carry out commissioning and training as per the BREEAM criteria (req 3). The contractor accounts for commissioning, testing, responsibilities and standards within budget and programme of works.
Man 04 Req 11-12	Handover	Ensure that prior to handover, two building user guides are developed a non-technical guide for building occupiers and a technical guide for FM and two training schedules are prepared, one as a non-technical training schedule for the building occupiers, and a technical version for FM team.
Man 05 Req 1-2	Aftercare Support	Provide an appropriate level of aftercare support to the client / building user for the first 12-months of occupation of the building.
Ene 06 Req 1-4	Energy Efficient Lifts	Instruct Lift manufacturer to provide BREEAM compliant vertical transport analysis and energy comparison report and install low energy lift specification including use of regen units

Credit		Requirements
		And ensure that the three energy efficient features at specified in each lift: - Lifts operate in a standby condition during off-peak periods. - The lift car lighting and display provides an average lamp efficacy of >70 lamp lumens/circuit watt. - The lift uses a drive controller capable of variable speed, voltage, and frequency control off the drive motor.
Mat 01 Req 3-7	Life Cycle Assessment	Provide assistance and relevant information to enable LCA consultant to carry out Life Cycle Assessment at RIBA Stage 4
Mat 03 Pre req	Responsible Sourcing	Requires that all timber used within the project will be legally harvested and traded timber.
Mat 03 Req 3	Measuring Responsible sourcing	Requires materials to be sourced with appropriate responsible sourcing certification (e.g. BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.) This requires that full detail of sourcing of products and quantities are provided for the **superstructure, internal finishes and substructure and hard landscaping** and that 20**%** of the available points are achieved.
Wst 01 Req 3-4	Construction Resource Efficiency	Requires a compliant Resource Management Plan to be used, and that non-hazardous construction waste is less than **13.3 m³ or 11.1 tonnes** per 100m² GIFA.
Wst 01 Req 6 - 7	Diversion of resources from landfill	Requires that 70% (by volume) of non-hazardous waste generated by the project is diverted from landfill and that 80% (by tonnage) of non-hazardous demolition waste generated by the project is diverted from landfill.
LE 02-05	Land use and Ecology	Requires that the contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site and attendance at coordination environmental workshops / discussions to discuss ecological issues associated with the design, construction, maintenance and ongoing use of the landscape and implementation of all recommended ecological solutions and monitoring of construction impacts.

8. SUMMARY AND RECOMMENDATIONS

In the preassessment meeting a target was identified to achieve an Excellent BREEAM UK NC V6 rating with a score of **78.45%** for the co-living and **75.25%** ie a contingency of **8.45%** & **5.25%**.

The results have been summarised in the sections above to highlight the credits where there is a time constraint, by discipline. A more detailed breakdown is provided in Appendix A.

It is recommended that each discipline review the suggested targets and ensure that the necessary elements are incorporated into the design documentation.

Please note that for any particular rating there are mandatory credits that need to be achieved within the targeted percentage score. These are also highlighted in Appendix A.

APPENDIX A- DETAILED ASSESSMENT REPORT:

BREEAM Pre Assessment report

RIDGE

Uxbridge Co-Living **BREEAM Version 6**

PASS	30
GOOD	45
VERY GOOD	55
EXCELLENT	70
OUTSTANDING	85

Report Prepared By: Sofia Magarinos
Checked by: Susie Sidley
Date: 20.03.2024

Results Summary			
Sector	**Total Available**	**Weighting**	**Target Score**
Management	21	11.0%	10.47%
Health & Wellbeing	19	14.0%	11.05%
Energy	22	16.0%	11.63%
Transport	12	10.0%	8.33%
Water	9	7.0%	4.66%
Materials	14	15.0%	11.78%
Waste	10	6.0%	4.20%
Land Use & Ecology	13	13.0%	9.00%
Pollution	12	8.0%	5.33%
Total Predicted Score			**76.45%**
Innovation	**10**	10.0%	**2.00%**
Total Score			**78.45%**
BREEAM Rating			**EXCELLENT**

Key to Responsibilities		
Role	Company	Ref
Client	DNA Uxbridge	**Client**
Project Manager / QS	Savills / TBC QS	**Savills / Cast Consultancy**
Architect	Child Graddon Lewis	**CGL**
M&E Consultant	Ridge and Partners	**M&E**
Structural & Civil Eng	Edge Consulting Engineers	**EDGE**
Landscape Architect	Oobe	**Oobe**
Acoustician	TBC	**Acoustician**
Ecologist	TBC	**Ecologist**
Transport Consultant	TBC	**Transport Consultant**
BREEAM Assessor BREEAM AP	Ridge and Partners	**Ridge**
Main Contractor	TBC	**Main Contractor /MC**
M&E Sub Contractor	TBC	**Sub Contractor**

Shading Denotes Mandatory Credit for Excellent

This document is to be read in conjunction with the current BREEAM Manual available online, which gives full details of credit requirements - https://www.breeam.com/NC2018/

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
MANAGEMENT							
Man01	**Project Brief and Design**						
Req 1-3	Project Delivery Planning	1	0.52	It is assumed that prior to the end of **RIBA Stage 2** all the project delivery stakeholders (client/developer, contractor, design team) meet, identify and define roles, responsibilities & contributions during each key phase. The project team demonstrates how the stakeholder contributions and consultation process influences the following: - Initial Project Brief - Project Execution Plan - Communications Strategy - Concept Design Please note all documents above need to be present even if they are combined into a single document.	1	High	PM / Design Team
Req 4-7	Stakeholder Consultation (Interested Parties)	1	0.52	Prior to the end of **RIBA Stage 2** it is required that consultation took place with all relevant parties. It must be demonstrated that the consultation has influenced the Project Brief and Concept Design. The relevant consultees and consultation content need to align with the detailed BRE requirements. Prior to the end of **RIBA Stage 4**, all interest parties give and receive feedback.	0		
Req 8	Pre-Requisite - BREEAM AP		0.52	It is assumed that the project team and client formally agree (contract or letters of appointment) strategic performance targets, including the BREEAM rating, early in the design process.		Low	PM
Req 9	BREEAM AP (Concept Design)	1	0.52	It is assumed that a BREEAM Accredited Professional (AP) is appointed as BREEAM AP during **RIBA Stage 1 / 2** and: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM throughout **Concept Design (RIBA Stage 2)** - Monitor progress against the performance targets throughout all stages - Identify risks and opportunities related to the achievement of the targets agreed - Provide feedback to the project team as appropriate - Monitor / coordinate generation of appropriate evidence by the project team.	1	Low	PM / Ridge (Sust)
Req 11-12	BREEAM AP (Developed Design)	1	0.52	It is assumed that Criteria 8 & 9 is achieved andin addition there is an appointed BREEAM AP who: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM throughout **Developed Design (RIBA Stage 3)** - Monitor progress against the performance targets throughout all stages - Identify risks and opportunities related to the achievement of the targets agreed - Provide feedback to the project team as appropriate - Monitor and coordinate the generation of appropriate evidence by the project team.	1	Low	PM / Ridge (Sust)
Man02	**Life Cycle Cost and Service Life Planning**						
Req 1-3	Elemental Life Cycle Cost	2	0.52	It is assumed the following will not be carried out; prior to the end of **RIBA Stage 2**, a competent person carries out an elemental life cycle costing analysis together with elemental options appraisals in accordance with PD 156865:2008. The LCC should show future replacement costs over 20, 30, 50 or 60 years and include service life, maintenance and operation cost estimates and be used to influence design and specification.	2	High	QS
Req 4-5	Component Level LCC Plan	1	0.52	It is assumed the following will not be carried out; prior to the end of **RIBA Stage 4** a competent person carries out a component level LCC plan in line with PD 156865:2008. Where present, the LCC plan should include: Envelope; Services; Finishes & External Spaces. The component level LCC must be used to influence design and specification.	1	Low	QS
Req 6	Capital Cost Reporting	1	0.52	Report the capital cost for the building in £k/m2 to the Assessor for reporting to the BRE via the BREEAM Spreadsheet	1	Low	QS
Man03	**Responsible Construction Practices**			**Minimum standard: Req 7 for Excellent, Req 8-9 for Outstanding**			
Req 1	Pre-requisite: Timber			It is assumed that all timber and timber based products used on the project are 'Legally harvested and traded timber'.		Low	MC

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 2-4	Environmental Management	1	0.52	It is understood that all **demolition / site preparation works** will be undertaken by the **main contractor**. It is assumed that the main contractor will: - Operate an EMS e.g. ISO14001 - Implement best practice pollution prevention policies and procedures.	1	Medium	MC
Req 5	Pre-requisite for BREEAM AP			The client and contractor formally agree the BREEAM rating required.		Low	MC
Req 6	BREEAM AP (Site)	1	0.52	It is assumed that Ridge will be appointed as BREEAM AP for **RIBA Stage 4-6**: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving the project's performance targets throughout the Construction, Handover and Close Out stages. - Monitors construction progress against the performance targets agreed - Identifies risks and opportunities related to the procurement and construction process - Provides feedback to the contractor and the project team - Monitors and coordinates the generation of appropriate evidence by the project team	1	Medium	Ridge (Sust) / MC
Req 7	Responsible Construction Management (Credit 1)	1	0.52	It is assumed that the project will provide evidence for the **9** items listed as required for one credit. A - Manage the construction site entrance to minimise the impacts (e.g. safety, disruption) arising from vehicles approaching and leaving the development footprint. D - Minimise the risks of air, land and water pollution. F - Practices ensure the development footprint is safe, clean and organised G - Ensure clear and safe access in and around the buildings at the point of handover. H - Provide processes and equipment required to respond to medical emergencies. J - Establish management practices and facilities encouraging equality, fair treatment and respect of all site operatives. N - Ensure ongoing training is provided, and up to date, for personnel and visitors (covering items a to l, as appropriate.) O - The principal contractor ensures that site operatives are trained for the tasks they are undertaking (including any site-specific considerations). R - All visitor, workforce and community accidents, incidents and near misses are recorded and action is taken to reduce the likelihood of them reoccurring.	1	Low	MC
Req 8-9	Responsible Construction Management (Credit 2)	1	0.52	It is assumed that the project will achieve at least a score of **39** overall on CCS, with no section scoring under **13** points.	1	Medium	MC
Req 10	Monitoring of Construction- Site Impacts- Pre-requisite		0.52	It is assumed that responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data throughout the build programme.		Low	MC
Req 11 - 18	Monitoring of Construction- Site Impacts (Energy and Water)	1	0.52	It is assumed that the appointed individual sets targets for, and monitors site energy consumption in kWh and also reports kgCO2, and kgCO2/project value. Targets are set for potable water consumption (m3) usage on site, and this is monitored throughout the programme.	1	Low	MC
Req 19-22	Monitoring of Construction- Site Impacts (Transport)	1	0.52	It is assumed that the appointed individual will set targets for, and monitor data on transport of construction materials and waste. KgCO2eq, km should be reported separately for materials and waste.	1	Low	MC
Man04	**Commissioning and Handover**			**Minimum Standard: Req 1-5 & 11 for Very Good & Above**			
Req 1-5	Commissioning - Testing Schedule and Responsibilities	1	0.52	Appoint an appropriate team member to monitor and programme pre-commissioning, commissioning and testing. A schedule of commissioning is prepared, identifying appropriate timescales and standards e.g. CIBSE, BSRIA. Where a BMS is installed, carry out commissioning and training as per the BREEAM criteria (req 3). The contractor accounts for commissioning, testing, responsibilities and standards within budget and programme of works.	1	Low	M&E Sub / MC
Req 6-7	Commissioning - Design and Preparation	1	0.52	The above credit is achieved and an appropriate team member, not involved in installation works, is appointed **during the design** to undertake design reviews, provide commissioning management input and manage commissioning performance testing and handover / post-handover stages. For a building with complex systems, a specialist commissioning manager must be appointed.	1	Low	M&E Sub

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 8-10	Testing and Inspecting Building Fabric	1	0.52	It is assumed the following will not be carried out; an air tightness survey, and **thermographic survey** are undertaken to QA integrity of the building fabric, continuity of insulation, avoidance of thermal bridging and air leakage paths. Any defects found are rectified.	1	Medium	Contractor
Req 11-12	Handover	1	0.52	Prior to handover, two building user guides are developed - a non technical guide for building occupiers and a technical guide for FM. A draft copy is developed and discussed with users first, where building occupiers are known. Two training schedules are prepared, one as a non-technical training schedule for the building occupiers, and a technical version for FM team.	1	Low	MC
Man05	**Aftercare**			**Minimum standard: Req 3 for Excellent or Outstanding**			
Req 1-2	Aftercare Support	1	0.52	Aftercare is provided to building occupiers as follows: - Meeting is held to cover BUG and training schedules, and to present key design information - On site FM training - Weekly attendance on site for the first 4 weeks - Longer term aftercare for 12 months e.g. helpline There will be collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems adjusted accordingly.	1	Low	MC / Sub Contractor
Req 3	Commissioning - Implementation	1	0.52	Commissioning activities will continue over a 12-month period covering: - Identification of changes made by the owner or operator that might have caused impaired or improved performance. - Testing of all building services under full load conditions - Testing during periods of extreme (high or low) occupancy. - Interviewing of building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. - Production of monthly reports comparing sub-metered energy performance to the predicted one - Identification of inefficiencies and areas in need of improvement. - Re-commissioning of systems (following any work needed to serve revised loads), and incorporation of any revisions in operating procedures into the operations and maintenance (O&M) manuals.	1	Low	MC / Sub Contractor
Req 4-7	Post Occupancy Evaluation	1	0.52	It is assumed that the following will not be carried out; a Post Occupancy Evaluation will be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned. The client commits funds to pay for the POE in advance, evidence of appointment needed to award the credit.	1	Low	Client
HEALTH & WELLBEING							
Hea01	**Visual Comfort**						
Req 1-3	Control of Glare from Sunlight	1	0.74	This credit requires - -A glare control assessment is carried out to identify areas at risk from glare and justify areas not at risk. - Glare control is provided to appropriate areas, this should not result in increased energy consumption e.g. vertical blinds used so that direct glare can be removed by sunlight is let in. Note blinds need to have openness factor of <1% and fabric light transmittance of <0.1(10%) Note, where compliant shading is provided to all relevant areas, a glare control assessment is not required.	1	Medium	CGL
Req 4	Daylighting	2	0.74	The following is **unlikely** to be achieved due to the presence of deep plan amenity / kitchen spaces: - For 2 credits: Average daylight factor in the occupied areas of least 2% in 80% of floor area, with uniformity criteria as table 5.2 in the V6 BREEAM Manual OR median daylight factor of 2% AND minimum daylight factor of 0.6% in 80% of floor area.	0	Possible	Daylight Consultant
Req 5-7	View Out	1	0.74	An adequate view out is provided for 95% of each relevant area (any area containing workstations / where close work will be undertaken), e.g. bedroom desks, kitchen clusters, amenity space) To achieve this credit, 95% of relevant areas must be within 8m to a window with rooms having >20% of the external wall made up of windows. If over 8m from a window, the window area should complies with table 1.0 BS 8206. In addition for living rooms of self-contained flats all positions within this relevant area are to be within 5m of a wall which has a window or permanent opening providing an adequate view out. The window must be >20% of the surrounding wall area.	1	Medium	CGL

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 8-14	Internal and External Lighting Levels, Zoning and Control	1	0.74	<u>For Internal lighting:</u> - Designed in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012. - Areas with computer screens complies with CIBSE Lighting Guide 7 sections 2.4, 2.13 - 2.15, 2.20 and 6.10 - 6.20. - Areas are zoned and controlled appropriate for their use and location i.e. office areas require separately zoned / controlled areas for each 40m2 (see credit criteria). <u>For External lighting:</u> - Areas within the construction zone comply with BS5489-1:2013 & BS12464-2:2014 Part 2.	1	Low	M&E Sub
Hea02	**Indoor Air Quality**						
Req 1	Pre-Requisite - Indoor Air Quality Plan			If credits below are sought an indoor air quality plan will need to be produced and implemented in accordance with the manual. These requirements include: 1.a Removal of contaminant sources 1.b Dilution and control of contaminant sources, including: 1.b.i Air quality requirements of specialist areas such as laboratories, where present 1.c Procedures for pre-occupancy flush out and purge ventilation 1.d Third party testing and analysis 1.e Maintaining good indoor air quality in-use 1.f Any relevant local authority plans or policies (for example, Air Quality Management Areas or Local Air Quality Action Plans)		Medium	M&E
Req 2	Ventilation	1	0.74	It is assumed that the building will **not** be designed to minimise the concentration and recirculation of pollutants by: 1. Providing fresh air into the building in accordance with the criteria of the relevant standard for ventilation. 2. Designing ventilation pathways to minimise the ingress and build-up of air pollutants 3. HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in **BS EN 16798:2017.** 4. Occupied spaces have carbon dioxide (CO_2) or air quality sensors specified in accordance with **Building Regulations ADF2** and: 4.a. In mechanically ventilated buildings or spaces, sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space. 4.b. In naturally ventilated buildings or spaces, sensors either have the ability to alert the building owner or manager when CO_2 levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, e.g. automatic opening windows or roof vents. 4.c. The total number of sensors, and the net internal area of relevant areas covered by the sensors, is reported via the BREEAM Scoring and Reporting Tool. 5. The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions, in accordance with: 5.a. CIBSE AM10 (for naturally ventilated buildings) 5.b. CIBSE AM13 (for mixed-mode buildings)	1	High	M&E
Req 3	Emissions from Construction Products (Credit 1)	1	0.74	It is assumed that **three** out of the **five** product types will **not** meet the emission limits, testing requirements and any additional requirements listed in Table 5.11. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.	1	High	
Req 4	Emissions from Construction Products (Credit 2)	1	0.74	It is assumed that all of the product types listed will **not** meet the emission limits, testing requirements and any additional requirements listed in Table 5.11.	0	Possible	
Req 5-10	Post Construction Indoor Air Quality Measurement	1	0.74	It is assumed that the following will not be carried out: - The formaldehyde concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 100 µg/ m³ averaged over 30 minutes. -The total volatile organic compound (TVOC) concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed **300** µg/ m³over 8 hours. -Where levels are found to exceed these limits, the project team confirms the measures that have, or will be, undertaken in accordance with the IAQ plan, to reduce the TVOC and formaldehyde levels to within the above limits.	1	Medium	
Hea04	**Thermal Comfort**						
Req 1-4	Thermal Modelling	1	0.74	It is assumed that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11. The study will demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5. In addition for naturally ventilated buildings overheating meets the recommendations of TM52 or TM59. For air conditioned buildings the PMV (predicted mean vote) and PPD (percentage people dissatisfied) is reported.	1	Medium	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 5-8	Design for Future Thermal Comfort	1	0.74	It is assumed that the dynamic thermal modelling will demonstrate compliance for the above criteria when run for a projected climate change environment (see Relevant definitions in the BREEAM V6 Manual), however this credit will be investigated by the M&E Consultant. Note that if the thermal comfort criteria are not met, the credit may still be achieved where a report is produced demonstrating how the building has been or can be easily adapted in future using passive design solutions in order to meet the requirements above. For air conditioned buildings/areas, the PMV and PPD indices based on the above modelling must be reported via the BREEAM assessment scoring and reporting tool.	1	High	M&E
Req 9-11	Thermal Zoning and Controls	1	0.74	The thermal modelling analysis has informed the temperature control strategy for the building and its users, addressing all of the issues below: 1. Zones within the building and how these could be efficiently heated and cooled. 2. The degree of occupant control required for these zones, based on discussions with the end user (or specific design guidance, case studies, feedback). This should consider: - User knowledge of building services - Occupancy type, patterns and room functions - How the user is likely to operate or interact with the system(s), - The user expectations and degree of individual control 3. If there are multiple systems, how they will interact with each other and how this will affect the thermal comfort of occupants. 4. The need for an accessible building user actuated manual override for any automatic systems	1	Medium	M&E
Hea05	**Acoustic Performance**						
	Sound Insulation	2	0.74	It is assumed that airborne sound insulation values are at least 5 dB higher and impact sound insulation values are at least 5 dB lower than the performance standards in the relevant building regulations or standards.	2	Medium	Acoustician
	Indoor Ambient Noise level	1	0.74	It is assumed that the indoor ambient noise levels will be within the suggested range stated in section 7 of BS8233:2014 will be achieved and verified by site testing.	1	Medium	
	Room Acoustics	1	0.74	It is assumed that within residential and common spaces of the building, the spaces will achieve the requirements relating to sound absorption described in the relevant building regulations or building standards national guidance and will be verified by site testing.	1	Medium	
Hea06	**Security**						
Req 1-3	Security of Site and Building	1	0.74	It is assumed that: - A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design **(RIBA Stage 2 or equivalent).** - The SQSS develops a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. - The controls and recommendations are incorporated into the proposals and implemented into the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	1	High	Savills / Client
Hea07	**Safe and Healthy Surroundings**						
Req 1-6	Safe Access	1	0.74	It is assumed that the following cannot be acheived: - Cycle storage is accessed directly from the public footpath off site - Footpaths provide direct access from the building footpath - Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths where provided (if relevant). - Delivery access does not cross pedestrian / cycle routes, amenity areas or pass through parking areas (if relevant). - Where there are delivery areas there is a waiting area adequate turning and parking space for the appropriate delivery vehicles (where relevant). - There is a dedicated waste storage area away from the delivery manoeuvring area or car parking (if required).	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 7	Outside Space	1	0.74	It is assumed that there will be an appropriately sized outside space providing building users with an external amenity area. The outside space must be an outdoor landscaped area open to the sky with appropriate seating areas. It must also be accessible to all building users and away from areas which may cause noise pollution e.g. building services, car parks, busy roads and delivery areas **and be non-smoking.**	1	Low	CGL / Landcspe Architect
ENERGY							
Ene01	**Reduction of Energy Use and Carbon Emissions**			**Minimum standard - 4no credits for Excellent**			
Req 1	Energy Performance	9	0.73	It is assumed that an Energy Performance Ratio of 0.6 or greater will be achieved to enable 6 credits to be awarded.	6	Medium	M&E
Req 2-9	Energy Modelling and Reporting	4	0.73	The following is required (based on CIBSE TM54:2022, or NABERS DfP): 2. Ensure the passive design credit is achieved (see Ene 04 below). 3. Estimate occupancy, energy use for unregulated energy and management practices. 4. Undertake detailed energy modelling to predict the building energy consumption. 5. Undertake sensitivity analysis to determine factors that impact energy consumption. 6. Based on the sensitivity analysis, and in discussion with the project team, the client and the prospective occupier devise scenarios to explore how high impact factors might influence the building energy consumption. 7. Undertake scenario modelling and use these findings to inform improvements to design of the building and to operational, maintenance, and handover strategies. 8. Determine an energy target for the building based on the results of the scenario modelling. 9. At the post-construction stage, the scenario modelling should be repeated to reflect the post construction building specification and, if necessary, adjust the energy target. 10. Demonstrate that operational energy performance has been substantially improved	4	High	M&E
Ene02	**Energy Monitoring**			**Minimum Standard: Req 1-4 (first credit) for Very Good and above**			
Req 1-5	Sub-metering of Major Energy Consuming Systems	1	0.73	Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. - The energy consuming systems in buildings with a total useful floor area greater than 1,000m2 are metered using an appropriate energy monitoring and management system. - The systems in smaller buildings are metered either with an energy monitoring/ management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system. - The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.	1	Medium	M&E
Ene03	**External lighting**						
	External lighting	1	0.73	It is assumed that: - The average initial luminous efficacy of the external light fittings within the construction zone is not less than 70 luminaire lumens per circuit Watt. - All external lights have daylight sensors & PIRs in areas of intermittent pedestrian traffic.	1	Medium	M&E
Ene04	**Low Carbon Design**						
Req 1-4	Passive Design Analysis	1	0.73	It is assumed that the first credit of Hea 04 Thermal Comfort has been achieved, **and** the following has been achieved: - The project team carries out a Passive Design Analysis (PDA) **during Concept Design stage (RIBA Stage 2)** which identifies opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. - The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the PDA. There is a >5% quantified total reduction in energy demand and CO2 emissions as a result of implementing passive design strategies.	1	Low	M&E
Req 5-8	Free Cooling	1	0.73	It is assumed that free cooling strategies will not be used exclusively	0		
Req 9-12	Low Zero Carbon Feasibility Study	1	0.73	It is assumed that the following will be achieved: - A feasibility study has been carried out by the completion of the Concept Design stage **(RIBA Stage 2)** by an energy specialist to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development. - Local LZC technology have been specified in line with the recommendations of the feasibility study and there is a reduction in regulated CO2 emissions from this.	1	Low	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Ene06	**Energy Efficient Transportation Systems**						
Req 1	Energy Consumption	1	0.73	It is assumed that: - An analysis of the transportation demand and usage patterns for the building has been carried out to determine the optimum number and size of transport systems. - The energy consumption has been calculated in accordance with BS EN ISO 25745 Part 2. - The analysis includes one of the following: At least two types of system; An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less); or A system strategy which is 'fit for purpose'. - The use of regenerative drives should be considered, where it produces an energy saving greater than the additional standby energy used to support it - The transportation system with the lowest energy consumption is specified.	1	Medium	Lift Manufacturer / HG
Req 3-4	Energy Efficient Features (Lifts)	1	0.73	It is assumed for each lift, the following three energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting & display lighting provides an average lamp efficacy, (across all fittings in the car) of > 70 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.	1	Medium	Lift Manufacturer / HG
Ene08	**Energy Efficient Equipment**						
	Energy Efficient Equipment	2	0.73	It is assumed that:- The building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption is estimated. Examples of significant contributors are:Swimming PoolLaundry Facilities with Commercial size AppliancesData CentresIT Intensive areasDomestic Scale White GoodsHealthcareKitchen & Catering facilities.- For the systems/ processes that use a significant proportion of the total annual unregulated energy consumption , demonstrate a meaningful reduction in the total annual unregulated energy consumption by design, specification or operation.	0	Possible	M&E
TRANSPORT							
Tra01	**Transport Assessment and Travel Plan**						
	Travel Plan	2	0.83	During Concept Design Stage **(RIBA Stage 2)** a draft travel plan needs to be created based on a site specific travel assessment. Note that all the points under criterion 2 need to be covered as minimum, including Accessibility Index and Local Amenities - see BREEAM 2018 NC Manual for more details. The travel plan includes proposals to increase or improve sustainable modes of transport and movement of people and goods during the building operation and use. The travel plan is implemented post construction and supported by the building's management in operations.	2	Medium	Transport consulatant
Tra02	**Sustainable Transport Measures**						
Req 1	Pre-requisite			Produce a Tra 01 compliant travel plan during **design stage**. This is a prerequisite to the following credits being awarded.		Medium	Transport consulatant
Req 2	Sustainable Transport Measures	10	0.83	It is assumed that 6**no points** will be achieved by implementing Sustainable Transport Measures as per Table 7.4 within the BREEAM Manual. . The points are awarded for each of the items below: - Accessibility Index of I > 8 (30.42 achieved) **(1 point) - confirmed** -provision of compliant covered cycle storage **(1 point)** - location of core amenities (Marks & Spencers food outlet, ATM & GP) **(1 point)** - ensure a minimum of 2no new accessible amenities (roof terraces as outside space, gym / yoga room as new recreation facility for fitness) **(3 points)**	8	Low	Transport Consultant / TGC

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
WATER							
Wat01	**Water Consumption**			**Minimum Standard: One credit for Good and above, Two credits for Outstanding**			
	Water Consumption	5	0.78	It is assumed that a **25%** improvement in water consumption over the notional baseline will be achieved. This would broadly equate to - WC's - 4.5l flush or better WHB taps - 5l/min or better Showers - 10l/min or better Kitchenette taps - 5l/min Domestic sized dishwashers (if present) - 13l/cycle Domestic sized washing machines - 12l/kg	2	Medium	M&E
Wat02	**Water Monitoring**			**Minimum Standard: Criterion 1 for Good and above**			
Req 1	Water Sub Meters			The main supply to the building will be fitted with a pulsed water meter.		Low	M&E
Req 2-6	Water Sub Meters	1	0.78	The main supply to the building will be fitted with a pulsed water meter. Additionally: - Sub-meters will be provided for any water consuming plant or building areas consuming 10% or more of the building's total water consumption . - Each water meter will have a pulsed output for connection to a BMS. - The sub meters are connected to any existing or proposed BMS - Sub meters are fitted to large water tanks separate to associated changing areas and sanitary areas irrespective of their water consumption levels. This will include water meter requirement under laundry facilities	1	Low	M&E
Wat03	**Water Leak Detection and Prevention**						
Req 1-2	Leak Detection System	1	0.78	It is assumed that a BREEAM compliant leak detection system will be specified or installed on the buildings water supply.	1	Low	M&E
Req 3	Flow Control Devices	1	0.78	It is assumed that flow control devices that regulate the water supply to the communal toilet areas or sanitary facility according to demand will be installed, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework. **Not** required on student ensuite facilities. The devices should be installed on the cold water supply to taps and WCs but must not allow the CWS to automatically switch off in showers while hot water is still running.	1	Medium	M&E
Wat04	**Water Efficient Equipment**						
	Water Efficient Equipment	1	0.78	It is assumed that the design team has identified all unregulated water demands that could be realistically mitigated or reduced. System(s) or processes have been identified to reduce the unregulated water demand a meaningful reduction in the total water demand of the building can be demonstrated. Some examples would be: 1. Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage, i.e. grey water collection from building functions or processes that use potable water, e.g. vehicle wash, training water in fire stations, sanitary facilities, irrigation etc. 2. External landscaping and planting that relies solely on precipitation, during all seasons of the year.	1	Medium	Landscape Architect
MATERIALS							
Mat01	**Environmental impacts from construction products -Building life cycle assessment (LCA)**						
Req 3-5	Superstructure	6	1.07	It is assumed that: - An IMPACT compliant / equivalent Life Cycle Assessment (LCA) carried out at **RIBA Stage 2**, considering LCA options for 4 substantially different superstructure elements. - This is followed by a **RIBA Stage 4** more detailed LCA review on a further 3 options based on the Stage 2 choice. - The Mat 01 calculator will need to be submitted to BRE at **Stage 2 & 4**. - The options appraisal and modelling needs to be integrated into the design process LCA Stage 2 modelling and optioneering carried out with input from team, and data submitted to the BRE prior to planning	6	Medium	Project Team / Ridge (Sust)

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 6-7	Substructure and Hard Landscaping Options Appraisal	1	1.07	It is assumed that: - An IMPACT compliant / equivalent Life Cycle Assessment (LCA) will be carried out at **RIBA Stage 2** and will consider LCA options for 6 substantially different substructure or hard landscaping elements (at least 2 being sub structure and 2 being hard landscaping). - The Mat 01 calculator will need to be submitted to BRE at **Stage 2**. LCA Stage 2 modelling and optioneering carried out with input from team, and data submitted to the BRE prior to planning	1	Medium	Project Team / Ridge (Sust)
Mat02	**Environmental impacts from construction products -Environmental Product Declarations (EPD)**						
	Specification of products with EPDs	1	1.07	It is assumed that there will **not** be sufficient construction products specified with an Environmental Product Declaration (EPD) to achieve a total EPD points score of at least 20. See BREEAM manual for further details.	0	Possible	CGT
Mat03	**Responsible Sourcing**			**Minimum standard: Req 1 for all BREEAM assessments**			
Req 1	Pre Requisite			All timber used within the project will be legally harvested and traded timber.		Low	Contractor
Req 2	Enabling Sustainable Procurement	1	1.07	It is assumed that a sustainable procurement plan was used by the design team to guide specification towards sustainable construction products before **Concept Design (i.e. during RIBA Stage 1).**	1	Low	Contractor
Req 3	Measuring Responsible Sourcing	3	1.07	It is assumed that materials will be sourced suppliers with appropriate responsible sourcing certification (e.g. BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.). 2 credits are currently targeted, requiring 20% of available points to be achieved for superstructure, substructure , hard landscaping and finishes.	2	Medium	Contractor
Mat05	**Designing for Durability and Resilience**						
	Protecting vulnerable parts of the building from damage	1	1.07	It is assumed that the building will be designed to incorporate suitable durability / protection measures / designed features / solutions to prevent damage to vulnerable parts of the internal & external building & landscaping, including: - Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). - Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. - Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring - Protection from malicious damage to building materials and finishes, in public and common areas where appropriate.	1	Medium	CGT
	Protecting exposed parts of the building from material degradation			It is assumed that: a) key exposed building elements will be designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through either: the element or product achieving an appropriate quality or durability standard or design guide, see Table 9.14 in BREEAM V6 Manual for more details. OR by carrying out a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. b) the building includes convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design. c) the roof and façade will be designed to prevent water damage, ingress and detrimental ponding.		Medium	CGT
Mat06	**Material Efficiency**						
	Material Efficiency	1	1.07	As no action was undertaken at Stage 1, the full requirements at **all** RIBA stages have **not** been met in order for this credit to be targeted.	0		
WASTE							
Wst01	**Construction Site Waste Management**			**Minimum standard: One Credit for Outstanding**			
Req 1-2	Pre-demolition audit	1	0.60	It is assumed that this credit cannot be targeted as it is expected that a compliant audit will not be conducted at a suitably early stage (**During Stage 2**) - Pre-demoliton audit commissioned	1	High	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 3-4	Construction Resource Efficiency	3	0.60	It is assumed that: - Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction. The RMP also covers accurate data records on waste arisings and waste management routes. - **One credit**: less than 13.3m³ or 11.1 tonnes of non-hazardous construction waste generated per 100m² GIFA. RMP being produced	1	High	Contractor
Req 5-6	Diversion of resources from Landfill	1	0.60	It is assumed that the following percentages of non-hazardous construction (on-site and off-site manufacture / fabrication in a dedicated facility), demolition waste generated by the project have been diverted from landfill: - Non Demolition - 70% by Volume or 80% by tonnage - Demolition - 80% by Volume or 90% by tonnage	1	High	Contractor
Wst02	**Use of Recycled and Sustainably Sourced Aggregates**						
Req 1	Pre-requisite			If demolition occurs on site, to encourage the reuse of site-won material on site, complete a Pre-Demolition Audit of any existing buildings, structures or hard surfaces		Low	Contractor
Req 2-6	Project Sustainable Aggregate Points	1	0.60	Achieve at least 3.5 points using the Wst 02 calculator, based on: - Identifing all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0	Possible	
Wst03	**Operational Waste**			**Minimum standard: One Credit for Excellent & Outstanding**			
Req 1	Dedicated space for recyclables	1	0.60	It is assumed that a dedicated recycling area, adequately sized to serve the development and accessible to building occupiers and waste contractors will be provided. This space will be sized to meet the client's requirements (as a guide 2m² per 1000m² net floor area). Additionally, for the co-living building, internal recycle waste facilities are also required in each communal and studio kitchen (30ltrs for mixed recycling plus 10ltrs for compostable food waste) in addition to general waste bins, these must not be free standing on the floor but in a dedicated location (i.e. in a dedicated cupboard). A home composting infomation leaflet must also be provided - See V6 criteria for further infomation	1	High	CGL / Client
Req 2	Compactor / Baler / Composting			Where relevant: It is assumed that a static compactor / baler will be provided in a dedicated waste management space AND a compliant vessel for composting organic waste will be provided.			
Wst05	**Adaptation to Climate Change**						
	Resilience of structure, fabric, building services and renewables installation	1	0.60	Conduct a Climate Change Adaptation Strategy Appraisal using: 1. A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes: - Hazard identification - Hazard assessment - Risk estimation - Risk evaluation - Risk management 2. Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during **RIBA Stage 2**, that aim to mitigate the identified impact. 3. Provide an update during **RIBA Stage 4** demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor.	1	Medium	CGL / M&E / Structures

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Wst06	**Design for Disassembly and Adaptability**						
Req 1-2	Design for disassembly and adaptability - Recommendations	1	0.60	It is assumed that: 1. A study was conducted to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of **RIBA Stage 2**. See full credit guidance within BREEAM V6 manual for the minimum considerations within the report. 2. Recommendations or solutions were developed based on the study during or prior to **RIBA Stage 2** that aim to enable and facilitate disassembly and functional adaptation.	1	Medium	CGL / M&E / Structures
Req 3-5	Design for disassembly and adaptability - Implementation	1	0.60	**I**t is assumed that: 1. The above credit is achieved. 2. An update is provided during RIBA Stage 3/4 on: - How the recommendations or solutions proposed by Concept Design **(RIBA Stage 2)** have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. - Changes to the recommendations / solutions during the development of **Stage 4.** 3. A building adaptability and disassembly guide will be produced to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1		
LAND USE & ECOLOGY							
LE01	**Site Selection**						
Req 1	Previously Developed land	1	1.00	It is assumed that **at least** 75% of the development's footprint (including building, hard landscaping, and temporary works) is on previously developed land.	1	Low	CGL / MC
Req 2-3	Contaminated land	1	1.00	It is **unlikely** that the site can be classed as contaminated or requiring remediation to enable development.	0	Possible	Savills / Client
LE02	**Identifying and understanding the risks and opportunities for the project**						
Req 1	Pre-requisite			It is assumed that the client or contractor will confirm compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.		High	Ecologist / HG
Req 2-5	Ecological Survey & Evaluation	1	1.00	It is assumed that a Suitably Qualified Ecologist will be appointed at a project stage that ensures early involvement in site configuration & can influence planning decisions AND prior to planning application (ideally **RIBA Stage 1/2)**, an appropriate level of survey and evaluation has been carried out to determine the ecological baseline of the site, taking account of the zone of influence to establish: - Current and potential ecological value and condition of the site, and related areas within the zone of influence. - Direct and indirect risks to current ecological value - Capacity and feasibility for enhancement of the ecological value of the site Data are collated and shared with project team to inform the site preparation, design or construction works.	1	High	Ecologist
Req 6-10	Determining Ecological Outcome	1	1.00	During Stage 2, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites (appropriate to the scale and type of development) for the project, taking into account the Route 2 hierarchy of actions listed in the table in the BREEAM v6 Manual.The optimal ecological outcome for the site is selected after liaising with representative stakeholders and the project team.	1	High	Project Team / Ecologist
LE03	**Managing negative impacts on ecology**						
Req 1	Pre-requisite			It is assumed that LE02 is achieved. It is assumed that the client or contractor will confirm that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.		High	Project Team / Ecologist

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 2-4	Planning, Liaison, Implementation & Data	1	1.00	It is assumed that the pre-requisite has been met and it is assumed that roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief (via Environmental Workshop meetings). Site preparation and construction works should have been planned for and are implemented at an early project stage to optimise benefits and outputs. The project team has been liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions, and measures have been selected, during site preparation and construction works.	1	High	Project Team / Ecologist
Req 7-8 (Route 2)	Managing negative impacts of the project	2	1.00	To achieve this credit, criteria 2-4 (above) must be achieved, negative impacts from site preparation and construction works must be managed according to the BREEAM hierarchy and the SQE confirms no loss of ecological value has occurred.	1	High	Ecologist
LE04	**Change and Enhancement of Ecological Value**						
Req 1-2	Pre-requisite			It is assumed that: - Negative impacts from site preparation and construction works have been managed according to the BREEAM hierarchy and the SQE confirms no loss of ecological value has occurred of where this is not possible, the loss of ecological value has been minimised. -The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology		High	Ecologist
Req 5 (Route 2)	Liaison, implementation and data collation	1	1.00	It is assumed the project team have been liaising and collaborating with representative internal & external stakeholders, taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value in the following order: - On site, and where this is not feasible, - Off site within the zone of influence. Where data is collected and potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site.	1	High	Project Team / Ecologist
Req 6 (Route 2)	Enhancement of ecology	3	1.00	It is assumed that a calculation of the change in ecological value occurring as a result of the project based on the process set out in GN36 using the BREEAM LE04 calculator	1	High	Ecologist
LE05	**Long Term Ecology Management and Maintenance**						
Req 1-2	Pre-requisite			It is assumed that: -The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. - Negative impacts from site preparation and construction works have been managed according to the BREEAM hierarchy and that the SQE confirms no loss of ecological value has occurred. -At least one credit under LE04 req 6 is achieved		High	Ecologist
Req 3-5	Management and maintenance throughout the project	1	1.00	It is assumed that the ecological outcomes defined in LE 02,03 & 04 will be monitored and the effectiveness of the mitigation and enhancement measures will be reviewed to ensure they are implemented. Management throughout the project should include the following: - Monitoring and reporting of outcomes and successes from the project. - Arrangements for ongoing management of landscape and habitat connected to the project (on and, where relevant, off site). - Maintaining ecological value of the site & relationship/connection to its zone of influence - Maintaining site in line with the any sustainability activities, e.g. ecosystems benefits (LE 02). A section on Ecology and Biodiversity will be included as part of the building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. This should include detailed management and maintenance plans as required by landscape and asset managers as well as relevant parts of the handover information for occupiers written in a format that encourages understanding and supportive behaviours.	1	High	Project Team / Ecologist

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req6-7	Landscape and ecology management plan	1	1.00	It is assumed that a landscape and ecology management plan, or similar, will be developed in accordance with BS 42020:2013 section 11.1 covering at least the first five years after project completion & includes: - Actions and responsibilities, prior to handover, to give to relevant individuals - The ecological value and condition of the site at handover and how this is expected to develop and change over time - Identification of opportunities for ongoing alignment with activities external to the development project & which supports the aims of BREEAM's Strategic Ecology Framework - Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts - Clearly defined and allocated roles and responsibilities. The landscape and management plan or similar is updated as appropriate to support maintenance of the ecological value of the site.	1	High	Project Team / Ecologist
POLLUTION							
Pol01	**Impact of Refrigerants**						
Req 2	Buildings With Refrigerants Prerequisite			It is assumed that: All systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.		Possible	M&E / M&E Sub
Req 3-5	Impact of Refrigerant	2	0.67	The refrigerants specified will achieve Direct Effect Life Cycle CO^2 equivalent emissions of ≤1000kg CO2e/kW cooling capacity.(note: both credits can be achieved if systems with refrigerants having GWP<10 can be specified)	0	Possible	M&E / M&E Sub
Req 6-7	Leak Detection System	1	0.67	It is assumed that the refrigerant systems will **not** have either hermetically sealed construction or BREEAM compliant refrigerant leak detection	0	Possible	M&E / M&E Sub
Pol02	**Local Air Quality**						
	Local Air Quality	2	0.67	**It is assumed that either all hot water and heating is supplied by non-combustion systems e.g. powered by electricity** OR that the emissions do not exceed the levels in table 12.4 of the BREEAM V6 NC Manual (e.g. 24 mg/kWh for gas boilers)	2	Low	M&E
Pol03	**Flood and Surface Water Management**						
Req 1	Pre-requisite			An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with all the criteria.		Low	Drainage Consultant
Req 2	Low Flood Risk	2	0.67	It is assumed that a site specific Flood Risk Assessment will be produced which confirms that the building is situated in a **low flood risk** area for all of the following: - Fluvial - Tidal - Surface Water - Groundwater - Sewers - Reservoirs, canals or other artificial sources.	2	Medium	
Req 5	Pre-requisite			Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site.		Low	Drainage Consultant
Req 6-8	Surface Water Run-Off - Rate	1	0.67	It is assumed that: - Drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) shows, where brownfield, a 30% improvement for developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. - Calculations include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	1	High	

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 9-15	Surface Water Run-Off - Volume	1	0.67	It is assumed that : - Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); - Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for 100-year 6-hour event, including climate change. - Where the above volume requirement is not achievable, justification from the Appropriate Consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. - Drainage design measures are specified to ensure the post development peak rate is reduced to the limiting discharge. This is defined as the highest flow rate from the following options: **a**. The pre-development 1-year peak flow rate; **b**. The mean annual flow rate Qbar; **c**. 2L/s/ha. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. - For either option above, calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	1	High	Drainage Consultant
Req 17-24	Minimising water course pollution	1	0.67	It is assumed that: - A suitably qualified professional will confirm that there will be no discharge from the site for up to 5mm of rainfall. - In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. - Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators installed in surface water drainage systems. - Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system. - All water pollution prevention systems have been designed and installed in accordance with therecommendations of documents such as the SuDS manual and other relevant industry best practice. - A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place. - All external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance.	0	Possible	Drainage Consultant
Pol04	**Reduction of Night Time Light Pollution**						
	Reduction of Night Time Light Pollution	1	0.67	It is assumed that **all** of the external lighting within the construction zone complies with the following: - Complies with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011 - All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. - Any safety or security lighting which is used between 23:00 & 07:00, complies with the lower levels of lighting recommended in Table 2 of the ILP's Guidance notes. - Illuminated advertisements must be designed in compliance with ILP PLG05.	1	Medium	M&E / M&E Sub
Pol05	**Reduction of Noise Pollution**						
	Reduction of Noise Pollution	1	0.67	It is assumed that: - A noise impact assessment in compliance with BS 4142:2014 will be carried out by a suitably qualified acoustician and the following noise levels measured/determined: i. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. ii. The rating noise level resulting from the new noise source. - The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development must be at least 5dB lower than the background noise throughout the day and night. - Where the noise source(s) from the proposed site/building is greater than above, measures have been installed to attenuate the noise at its source to a level where it will comply with the above.	1	Low	Acoustician / M&E
INNOVATION CREDITS							
Man 03 Req 23	Responsible Construction Management	1	1.00	It is assumed that the project will achieve at least a score of **39** overall on CCS, with no section scoring under **13** points.	0	Possible	Main Contractor
Hea 01 Req 15	Daylighting	1	1.00	The relevant building areas are **unlikely to meet the exemplary** daylighting criteria as per Table 5.8 or Table 5.9 within the BREEAM 2018 Manual.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Hea 01 Req 16	Internal and External Lighting Zones & Controls	1	1.00	It is assumed that lighting in each zone **cannot** be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. This credit is to be reviewed as the design develops. If sought, dimming and control gear should avoid flicker and noise.	0		
Hea 02 Req 11	Minimising sources of air pollution	1	1.00	**Less than** Three of the product types listed meet the emission limits, testing requirements and any additional requirements listed in Table 5.12. Where wood-based products are not one of the three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.	0		
Hea 06 Req 4	Security of Site and Building	1	1.00	A compliant risk based security assessment scheme has **NOT** been used. The performance against the scheme has been confirmed by independent assessment and verification. Note that SABRE is currently the only BRE recognised scheme.	0		
Ene 01 Req 6-7	Beyond Zero Net Regulated Carbon	2	1.00	Building **is unlikely to** achieve EPR of at least 0.9 and zero net regulated carbon emissions & energy generation from on-site and near-site LZC sources offsets carbon emissions from regulated energy use plus unregulated energy use **is unlikely to exceed 10% or achieve 50%**	0		
Ene 01 Req 9	Carbon Negative Req 9	1	1.00	**<100%** carbon emissions from unregulated (and regulated) energy use are offset by energy generated from off-site and near-site LZC sources.	0		
Ene 01 Req 10-12	Post Occupancy Stage	2	1.00	Funds are **NOT currently** committed to pay for the post occupancy stage BREEAM Certification. An assessor **is not** appointed to report on the actual energy consumption compared with targets set. Energy model is **not** submitted to the BRE & retained by the building owner. This credit requires maximum available credits in Ene 02 and operational energy 4 credits to be achieved.	0		
Wat 01 Req 7-8	Water Consumption	1	1.00	It is assumed that the building will **not** achieve a reduction in water consumption by 65% over the notional baseline.	0		
Mat01 Req 8-9	LCA -Core Building Services Options	1	1.00	It is assumed that LCA options appraisal is **NOT** completed for 3 significantly different core building services options using a recognised LCA tool during Concept Design & tool is submitted to BRE	0		
Mat01 Req 11-14	LCA & LCC Alignment	1	1.00	It is assumed that the following will be be achieved: - LCA credits for superstructure @ **Concept & Technical Design** stages achieved. - Elemental LCC plan and Component Level LCC options appraisal credits (Man 02 Life cycle cost and service life planning on page 45) achieved. - Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process - Record results in an Options Appraisal Summary Report.	1	**Medium**	**Project Team**
Mat01 Req 15-18	LCA - Third party verification	1	1.00	It is assumed that: - LCA credits for superstructure @ **Concept & Technical Design** Stages - LCA credits for Substructure & landscaping options have been achieved. - A suitably qualified third party either carries out the building LCA work or verifies the building LCA work (if by others), and produces a report describing how they have checked the building LCA work accurately represent the designs under consideration during **Concept Design** and **Technical Design** with reference to the requirements of all relevant BREEAM criteria.	1	**Medium**	**Project Team**
Mat 03 Req 3	Measuring Responsible Sourcing	1	1.00	It is assumed that using the manufacturers with appropriate responsible sourcing certification for Superstructure, internal finishes, substructure, hard landscaping and core building services <50% of available points will be achieved	0		
Wst 01 Req 3-4	Construction Waste Management	1	1.00	As per criteria for Wst 01 Construction Resource Efficiency and Diversion of Resources from Landfill, the following benchmarks are achieved: -Non hazardous construction waste will **NOT** be less than 1.6m³ / 1.9 tonnes per 100m². -Diversion from landfill targets **may not** be met for Non Demolition & Demolition (85% by Volume or 90% by tonnage) & Excavation(95% by Volume or 90% by tonnage) -Additionally all key waste groups in Table 10.3 for diversion from landfill are covered in the RMP. Waste data obtained from licensed external waste contractors is reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company.	0		
Wst 02 Req 7	Project Sustainable Aggregate Points	1	1.00	Achieve **less than** 6 points using the Wst 02 calculator, based on: - Identifying all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Wst 05 Req 4-5	Responding to Climate Change	1	1.00	**Not ALL** of the following credits are achieved: - Hea 04 - Criterion 6 - Ene 01 - 6 credits - Ene 04 - Passive Design Analysis credit - Wat 01 - 3 credits - Mat 05 - Criteria 2-4 - Wst 05 - Req 1-3 (full credit) - Pol 03 - 1 credit for flood resilience plus 2 credits for surface water run-off	0		
LE 02 Req 11-13	Determine the Ecological Outcomes for the Site	2	1.00	When determining the optimal ecological outcome for the site, sustainability-related activities and the potential for ecosystem service related benefits for the wider site will **NOT necessarily** be considered. And **not** all of the following credits will be achieved: **Hea 07** - Safe Access ; **Hea 07** - Outdoor Space; **Pol 03** - Surface water run-off & minimising water course pollution; **Pol 05** - Reduction of Noise Pollution	0		
LE 04 Req 13	Enhancing Ecology	1	1.00	It is assumed a biodiversity change of at least 110% is **not** achieved	0		
Unlisted, BRE Approved Innovations		10	1.00	**No unlisted innovation credits will be sought**	0		

BREEAM Pre Assessment report

RIDGE

Uxbridge Co-Living - Hotel

BREEAM Version 6

PASS	30
GOOD	45
VERY GOOD	55
EXCELLENT	70
OUTSTANDING	85

Report Prepared By: Sofia Magarinos
Checked by: Susie Sidley
Date: 20.03.2024

Shading Denotes Mandatory Credit for Excellent

This document is to be read in conjunction with the current BREEAM Manual available online, which gives full details of credit requirements - https://www.breeam.com/NCV6/

Results Summary			
Sector	**Total Available**	**Weighting**	**Target Score**
Management	21	11.0%	10.47%
Health & Wellbeing	18	14.0%	9.33%
Energy	23	16.0%	11.82%
Transport	12	10.0%	6.66%
Water	9	7.0%	4.66%
Materials	14	15.0%	11.78%
Waste	10	6.0%	4.20%
Land Use & Ecology	13	13.0%	9.00%
Pollution	12	8.0%	5.33%
Total Predicted Score			**73.25%**
Innovation	**10**	10.0%	**2.00%**
Total Score			**75.25%**
BREEAM Rating			**EXCELLENT**

Key to Responsibilities		
Role	Company	Ref
Client	DNA Uxbridge	**Client**
Project Manager	Savills	**Savills**
Architect	Child Graddon Lewis	**CGL**
M&E Consultant	Ridge and Partners	**M&E**
Structural & Civil Eng	Edge Consulting Engineers	**EDGE**
Landscape Architect	Oobe	**Oobe**
Acoustician	TBC	**Acoustician**
Ecologist	TBC	**Ecologist**
Transport Consultant	TBC	**Transport Consultant**
BREEAM Assessor & BREEAM AP	Ridge and Partners	**Ridge**
Main Contractor	TBC	**Main Contractor /MC**
M&E Sub Contractor	TBC	**Sub Contractor**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
MANAGEMENT							
Man01	**Project Brief and Design**						
Req 1-3	Project Delivery Planning	1	0.52	It is assumed that prior to the end of **RIBA Stage 2** all the project delivery stakeholders (client/developer, contractor, design team) meet, identify and define roles, responsibilities & contributions during each key phase. The project team demonstrates how the stakeholder contributions and consultation process influences the following: - Initial Project Brief - Project Execution Plan - Communications Strategy - Concept Design Please note all documents above need to be present even if they are combined into a single document.	1	High	PM / Design Team
Req 4-7	Stakeholder Consultation (Interested Parties)	1	0.52	Prior to the end of **RIBA Stage 2** it is required that consultation took place with all relevant parties. It must be demonstrated that the consultation has influenced the Project Brief and Concept Design. The relevant consultees and consultation content need to align with the detailed BRE requirements. Prior to the end of **RIBA Stage 4**, all interest parties give and receive feedback.	0		
Req 8	Pre-Requisite - BREEAM AP		0.52	It is assumed that the project team and client formally agree (contract or letters of appointment) strategic performance targets, including the BREEAM rating, early in the design process.		Low	PM
Req 9	BREEAM AP (Concept Design)	1	0.52	It is assumed that a BREEAM Accredited Professional (AP) is appointed as BREEAM AP during **RIBA Stage 1 / 2** and: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM throughout **Concept Design (RIBA Stage 2)** - Monitor progress against the performance targets throughout all stages - Identify risks and opportunities related to the achievement of the targets agreed - Provide feedback to the project team as appropriate - Monitor / coordinate generation of appropriate evidence by the project team.	1	Low	PM / Ridge (Sust)
Req 11-12	BREEAM AP (Developed Design)	1	0.52	It is assumed that Criteria 8 & 9 is achieved andin addition there is an appointed BREEAM AP who: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM throughout **Developed Design (RIBA Stage 3)** - Monitor progress against the performance targets throughout all stages - Identify risks and opportunities related to the achievement of the targets agreed - Provide feedback to the project team as appropriate - Monitor and coordinate the generation of appropriate evidence by the project team.	1	Low	PM / Ridge (Sust)
Man02	**Life Cycle Cost and Service Life Planning**						
Req 1-3	Elemental Life Cycle Cost	2	0.52	It is assumed the following will not be carried out; prior to the end of **RIBA Stage 2**, a competent person carries out an elemental life cycle costing analysis together with elemental options appraisals in accordance with PD 156865:2008. The LCC should show future replacement costs over 20, 30, 50 or 60 years and include service life, maintenance and operation cost estimates and be used to influence design and specification.	2	High	LCC Consultant
Req 4-5	Component Level LCC Plan	1	0.52	It is assumed the following will not be carried out; prior to the end of **RIBA Stage 4** a competent person carries out a component level LCC plan in line with PD 156865:2008. Where present, the LCC plan should include: Envelope; Services; Finishes & External Spaces. The component level LCC must be used to influence design and specification.	1	Low	LCC Consultant
Req 6	Capital Cost Reporting	1	0.52	Report the capital cost for the building in £k/m2 to the Assessor for reporting to the BRE via the BREEAM Spreadsheet	1	Low	QS

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Man03	**Responsible Construction Practices**			**Minimum standard: Req 7 for Excellent, Req 8-9 for Outstanding**			
Req 1	Pre-requisite: Timber			It is assumed that all timber and timber based products used on the project are 'Legally harvested and traded timber'.		Low	MC
Req 2-4	Environmental Management	1	0.52	It is understood that all **demolition / site preparation works** will be undertaken by the **main contractor**. It is assumed that the main contractor will: - Operate an EMS e.g. ISO14001 - Implement best practice pollution prevention policies and procedures.	1	Medium	MC
Req 5	Pre-requisite for BREEAM AP			The client and contractor formally agree the BREEAM rating required.		Low	MC
Req 6	BREEAM AP (Site)	1	0.52	It is assumed that Ridge will be appointed as BREEAM AP for **RIBA Stage 4-6**: - Works with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving the project's performance targets throughout the Construction, Handover and Close Out stages. - Monitors construction progress against the performance targets agreed - Identifies risks and opportunities related to the procurement and construction process - Provides feedback to the contractor and the project team - Monitors and coordinates the generation of appropriate evidence by the project team	1	Medium	Ridge (Sust) / MC
Req 7	Responsible Construction Management (Credit 1)	1	0.52	It is assumed that the project will provide evidence for the 9 items listed as required for one credit. A - Manage the construction site entrance to minimise the impacts (e.g. safety, disruption) arising from vehicles approaching and leaving the development footprint. D - Minimise the risks of air, land and water pollution. F - Practices ensure the development footprint is safe, clean and organised G - Ensure clear and safe access in and around the buildings at the point of handover. H - Provide processes and equipment required to respond to medical emergencies. J - Establish management practices and facilities encouraging equality, fair treatment and respect of all site operatives. N - Ensure ongoing training is provided, and up to date, for personnel and visitors (covering items a to l, as appropriate.) O - The principal contractor ensures that site operatives are trained for the tasks they are undertaking (including any site-specific considerations). R - All visitor, workforce and community accidents, incidents and near misses are recorded and action is taken to reduce the likelihood of them reoccurring.	1	Low	MC
Req 8-9	Responsible Construction Management (Credit 2)	1	0.52	It is assumed that the project will achieve at least a score of **39** overall on CCS, with no section scoring under **13** points.	1	Medium	MC
Req 10	Monitoring of Construction- Site Impacts- Pre-requisite		0.52	It is assumed that responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data throughout the build programme.		Low	MC
Req 11 - 18	Monitoring of Construction- Site Impacts (Energy and Water)	1	0.52	It is assumed that the appointed individual sets targets for, and monitors site energy consumption in kWh and also reports kgCO2, and kgCO2/project value. Targets are set for potable water consumption (m3) usage on site, and this is monitored throughout the programme.	1	Low	MC
Req 19-22	Monitoring of Construction- Site Impacts (Transport)	1	0.52	It is assumed that the appointed individual will set targets for, and monitor data on transport of construction materials and waste. KgCO2eq, km should be reported separately for materials and waste.	1	Low	MC
Man04	**Commissioning and Handover**			**Minimum Standard: Req 1-5 & 11 for Very Good & Above**			
Req 1-5	Commissioning - Testing Schedule and Responsibilities	1	0.52	Appoint an appropriate team member to monitor and programme pre-commissioning, commissioning and testing. A schedule of commissioning is prepared, identifying appropriate timescales and standards e.g. CIBSE, BSRIA. Where a BMS is installed, carry out commissioning and training as per the BREEAM criteria (req 3). The contractor accounts for commissioning, testing, responsibilities and standards within budget and programme of works.	1	Low	M&E Sub / MC

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 6-7	Commissioning - Design and Preparation	1	0.52	The above credit is achieved and an appropriate team member, not involved in installation works, is appointed **during the design** to undertake design reviews, provide commissioning management input and manage commissioning performance testing and handover / post-handover stages. For a building with complex systems, a specialist commissioning manager must be appointed.	1	Low	M&E Sub
Req 8-10	Testing and Inspecting Building Fabric	1	0.52	Air tightness survey, and **thermographic survey** are undertaken to QA integrity of the building fabric, continuity of insulation, avoidance of thermal bridging and air leakage paths. Any defects found are rectified.	1	Medium	Contractor
Req 11-12	Handover	1	0.52	Prior to handover, two building user guides are developed - a non technical guide for building occupiers and a technical guide for FM. A draft copy is developed and discussed with users first, where building occupiers are known. Two training schedules are prepared, one as a non-technical training schedule for the building occupiers, and a technical version for FM team.	1	Low	MC
Man05	**Aftercare**			**Minimum standard: Req 3 for Excellent or Outstanding**			
Req 1-2	Aftercare Support	1	0.52	Aftercare is provided to building occupiers as follows: - Meeting is held to cover BUG and training schedules, and to present key design information - On site FM training - Weekly attendance on site for the first 4 weeks - Longer term aftercare for 12 months e.g. helpline There will be collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems adjusted accordingly.	1	Low	MC / Client
Req 3	Commissioning - Implementation	1	0.52	Commissioning activities will continue over a 12-month period covering: - Identification of changes made by the owner or operator that might have caused impaired or improved performance. - Testing of all building services under full load conditions - Testing during periods of extreme (high or low) occupancy. - Interviewing of building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. - Production of monthly reports comparing sub-metered energy performance to the predicted one - Identification of inefficiencies and areas in need of improvement. - Re-commissioning of systems (following any work needed to serve revised loads), and incorporation of any revisions in operating procedures into the operations and maintenance (O&M) manuals.	1	Low	MC / Sub Contractor
Req 4-7	Post Occupancy Evaluation	1	0.52	It is assumed that the following will not be carried out; a Post Occupancy Evaluation will be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned. The client commits funds to pay for the POE in advance, evidence of appointment needed to award the credit.	1	Low	Client
HEALTH & WELLBEING							
Hea01	**Visual Comfort**						
Req 1-3	Control of Glare from Sunlight	1	0.78	This credit requires - -A glare control assessment is carried out to identify areas at risk from glare and justify areas not at risk. - Glare control is provided to appropriate areas, this should not result in increased energy consumption e.g. vertical blinds used so that direct glare can be removed by sunlight is let in. Note blinds need to have openness factor of <1% and fabric light transmittance of <0.1(10%) Note, where compliant shading is provided to all relevant areas, a glare control assessment is not required.	1	High	CGL
Req 4	Daylighting	1	0.78	The following is **unlikely** to be achieved due to the presence of deep plan amenity / kitchen spaces: - For 2 credits: Average daylight factor in the occupied areas of least 2% in 80% of floor area, with uniformity criteria as table 5.2 in the V6 BREEAM Manual OR median daylight factor of 2% AND minimum daylight factor of 0.6% in 80% of floor area.	0	Possible	Daylight Consultant

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 5-7	View Out	1	0.78	An adequate view out is provided for 95% of each relevant area (any area containing workstations / where close work will be undertaken), e.g. bedroom desks, kitchen clusters, amenity space) To achieve this credit, 95% of relevant areas must be within 8m to a window with rooms having >20% of the external wall made up of windows. If over 8m from a window, the window area should complies with table 1.0 BS 8206. In addition for living rooms of self-contained flats all positions within this relevant area are to be within 5m of a wall which has a window or permanent opening providing an adequate view out. The window must be >20% of the surrounding wall area.	0	Possible	CGL
Req 8-14	Internal and External Lighting Levels, Zoning and Control	1	0.78	<u>For Internal lighting:</u> - Designed in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012. - Areas with computer screens complies with CIBSE Lighting Guide 7 sections 2.4, 2.13 - 2.15, 2.20 and 6.10 - 6.20. - Areas are zoned and controlled appropriate for their use and location i.e. office areas require separately zoned / controlled areas for each 40m2 (see credit criteria). <u>For External lighting:</u> - Areas within the construction zone comply with BS5489-1:2013 & BS12464-2:2014 Part 2.	1	Low	M&E Sub
Hea02	**Indoor Air Quality**						
Req 1	Pre-Requisite - Indoor Air Quality Plan			If credits below are sought an indoor air quality plan will need to be produced and implemented in accordance with the manual. These requirements include: 1.a Removal of contaminant sources 1.b Dilution and control of contaminant sources, including: 1.b.i Air quality requirements of specialist areas such as laboratories, where present 1.c Procedures for pre-occupancy flush out and purge ventilation 1.d Third party testing and analysis 1.e Maintaining good indoor air quality in-use 1.f Any relevant local authority plans or policies (for example, Air Quality Management Areas or Local Air Quality Action Plans)		Medium	M&E
Req 2	Ventilation	1	0.78	It is assumed that the building will not be designed to minimise the concentration and recirculation of pollutants by: 1. Providing fresh air into the building in accordance with the criteria of the relevant standard for ventilation. 2. Designing ventilation pathways to minimise the ingress and build-up of air pollutants 3. HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 16798:2017. 4. Occupied spaces have carbon dioxide (CO_2) or air quality sensors specified in accordance with Building Regulations ADF2 and: 4.a. In mechanically ventilated buildings or spaces, sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space. 4.b. In naturally ventilated buildings or spaces, sensors either have the ability to alert the building owner or manager when CO_2 levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, e.g. automatic opening windows or roof vents. 4.c. The total number of sensors, and the net internal area of relevant areas covered by the sensors, is reported via the BREEAM Scoring and Reporting Tool. 5. The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions, in accordance with: 5.a. CIBSE AM10 (for naturally ventilated buildings) 5.b. CIBSE AM13 (for mixed-mode buildings)	1	High	M&E
Req 3	Emissions from Construction Products (Credit 1)	1	0.78	It is assumed that **three** out of the **five** product types will **not** meet the emission limits, testing requirements and any additional requirements listed in Table 5.11. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.	0	Possible	CGL
Req 4	Emissions from Construction Products (Credit 2)	1	0.78	It is assumed that all of the product types listed will **not** meet the emission limits, testing requirements and any additional requirements listed in Table 5.11.	0	Possible	CGL

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 5-10	Post Construction Indoor Air Quality Measurement	1	0.78	It is assumed that the following will not be carried out: - The formaldehyde concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 100 µg/ m³ averaged over 30 minutes. -The total volatile organic compound (TVOC) concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed **300** µg/ m³over 8 hours. -Where levels are found to exceed these limits, the project team confirms the measures that have, or will be, undertaken in accordance with the IAQ plan, to reduce the TVOC and formaldehyde levels to within the above limits.	1	High	MC
Hea04	**Thermal Comfort**						
Req 1-4	Thermal Modelling	1	0.78	It is assumed that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11. The study will demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5. In addition for naturally ventilated buildings overheating meets the recommendations of TM52 or TM59. For air conditioned buildings the PMV (predicted mean vote) and PPD (percentage people dissatisfied) is reported.	1	Medium	M&E
Req 5-8	Design for Future Thermal Comfort	1	0.78	It is assumed that the dynamic thermal modelling will demonstrate compliance for the above criteria when run for a projected climate change environment (see Relevant definitions in the BREEAM V6 Manual), however this credit will be investigated by the M&E Consultant. Note that if the thermal comfort criteria are not met, the credit may still be achieved where a report is produced demonstrating how the building has been or can be easily adapted in future using passive design solutions in order to meet the requirements above. For air conditioned buildings/areas, the PMV and PPD indices based on the above modelling must be reported via the BREEAM assessment scoring and reporting tool.	1	High	M&E
Req 9-11	Thermal Zoning and Controls	1	0.78	The thermal modelling analysis has informed the temperature control strategy for the building and its users, addressing all of the issues below: 1. Zones within the building and how these could be efficiently heated and cooled. 2. The degree of occupant control required for these zones, based on discussions with the end user (or specific design guidance, case studies, feedback). This should consider: - User knowledge of building services - Occupancy type, patterns and room functions - How the user is likely to operate or interact with the system(s), - The user expectations and degree of individual control 3. If there are multiple systems, how they will interact with each other and how this will affect the thermal comfort of occupants. 4. The need for an accessible building user actuated manual override for any automatic systems	1	Medium	M&E
Hea05	**Acoustic Performance**						
	Sound Insulation	2	0.78	It is assumed that airborne sound insulation values are at least 5 dB higher and impact sound insulation values are at least 5 dB lower than the performance standards in the relevant building regulations or standards.	2	Medium	Acoustican
	Indoor Ambient Noise level	1	0.78	It is assumed that the indoor ambient noise levels will be within the suggested range stated in section 7 of BS8233:2014 will be achieved and verified by site testing.	1	Medium	
	Room Acoustics	1	0.78	It is assumed that within residential and common spaces of the building, the spaces will achieve the requirements relating to sound absorption described in the relevant building regulations or building standards national guidance and will be verified by site testing.	1	Medium	

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Hea06	**Security**						
Req 1-3	Security of Site and Building	1	0.78	It is assumed that: - A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design **(RIBA Stage 2 or equivalent).** - The SQSS develops a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. - The controls and recommendations are incorporated into the proposals and implemented into the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	1	High	Savills / Client
Hea07	**Safe and Healthy Surroundings**						
Req 1-6	Safe Access	1	0.78	It is assumed that the following cannot be acheived: - Cycle storage is accessed directly from the public footpath off site - Footpaths provide direct access from the building footpath, with no car parking included on site - Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths where provided (if relevant). - Delivery access does not cross pedestrian / cycle routes, amenity areas or pass through parking areas (if relevant). - Where there are delivery areas there is a waiting area adequate turning and parking space for the appropriate delivery vehicles (where relevant). - There is a dedicated waste storage area away from the delivery manoeuvring area or car parking (if required).	0		
Req 7	Outside Space	1	0.78	It is assumed that there will be an appropriately sized outside space providing building users with an external amenity area. The outside space must be an outdoor landscaped area open to the sky with appropriate seating areas. It must also be accessible to all building users and away from areas which may cause noise pollution e.g. building services, car parks, busy roads and delivery areas **and be non-smoking.**	0	Possible	CGL
ENERGY							
Ene01	**Reduction of Energy Use and Carbon Emissions**			**Minimum standard - 4no credits for Excellent**			
Req 1	Energy Performance	9	0.70	It is assumed that an Energy Performance Ratio of 0.6 or greater will be achieved to enable 6 credits to be awarded.	6	Medium	M&E
Req 3-5	Energy Modelling and Reporting	4	0.70	The following is required (based on CIBSE TM54:2022): 2. Ensure the passive design credit is achieved (see Ene 04 below). 3. Estimate occupancy, energy use for unregulated energy and management practices. 4. Undertake detailed energy modelling to predict the building energy consumption. 5. Undertake sensitivity analysis to determine factors that impact energy consumption. 6. Based on the sensitivity analysis, and in discussion with the project team, the client and the prospective occupier devise scenarios to explore how high impact factors might influence the building energy consumption. 7. Undertake scenario modelling and use these findings to inform improvements to design of the building and to operational, maintenance, and handover strategies. 8. Determine an energy target for the building based on the results of the scenario modelling. 9. At the post-construction stage, the scenario modelling should be repeated to reflect the post construction building specification and, if necessary, adjust the energy target. 10. Demonstrate that operational energy performance has been substantially improved	4	High	M&E
Ene02	**Energy Monitoring**			**Minimum Standard: Req 1-4 (first credit) for Very Good and above**			
Req 1-3	Sub-metering of Major Energy Consuming Systems	1	0.70	Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. - The energy consuming systems in buildings with a total useful floor area greater than 1,000m2 are metered using an appropriate energy monitoring and management system. - The systems in smaller buildings are metered either with an energy monitoring/ management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system. - The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.	1	Medium	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 4	Sub-metering of high energy load and tenancy areas	1	0.70	Monitor a significant majority of the energy supply with: An accessible energy monitoring and management system for: tenanted areas or relevant function areas or departments in single occupancy buildings. OR Separate accessible energy sub-meters with pulsed or other open protocol communication outputs for future connection to an energy monitoring and management system for: tenanted areas or relevant function areas or departments in single occupancy	1	Medium	M&E
Ene03	**External lighting**						
	External lighting	1	0.70	It is assumed that: - The average initial luminous efficacy of the external light fittings within the construction zone is not less than 70 luminaire lumens per circuit Watt. - All external lights have daylight sensors & PIRs in areas of intermittent pedestrian traffic.	1	Medium	M&E
Ene04	**Low Carbon Design**						
Req 1-4	Passive Design Analysis	1	0.70	It is assumed that the first credit of Hea 04 Thermal Comfort has been achieved, **and** the following has been achieved: - The project team carries out a Passive Design Analysis (PDA) **during Concept Design stage (RIBA Stage 2)** which identifies opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. - The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the PDA. There is a >5% quantified total reduction in energy demand and CO2 emissions as a result of implementing passive design strategies.	1	Low	M&E
Req 5-8	Free Cooling	1	0.70	It is assumed that free cooling strategies will not be used exclusively	0		
Req 9-12	Low Zero Carbon Feasibility Study	1	0.70	It is assumed that the following will be achieved: - A feasibility study has been carried out by the completion of the Concept Design stage **(RIBA Stage 2)** by an energy specialist to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development. - Local LZC technology have been specified in line with the recommendations of the feasibility study and there is a reduction in regulated CO2 emissions from this.	1	Low	M&E
Ene05	**Energy Efficient Cold Storage**						
Req 1-2	Refrigeration Energy Consumption	0	0.70	It is assumed that the refrigeration system will NOT be designed, installed and commissioned: a: In accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector1 (see Additional information) and BS EN 378-2:20162. b: Using robust and tested refrigeration systems or components included on the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL)3 or an equivalent list (see Components on the ECA Energy Technology Product List for a list of components). In addition, the refrigeration plant will be commissioned in compliance with the commissioning criteria in BREEAM issue Man 04 Commissioning and handover	0		
Req 3-4	Indirect Greenhouse Gas Emissions	0	0.70	It is assumed that criteria 1 and 2 above will NOT be achieved. The team will demonstrate a saving in indirect greenhouse gas emissions (CO_2-eq) from the installed refrigeration system over the course of its operational life.	0		
Ene06	**Energy Efficient Transportation Systems**						
Req 1	Energy Consumption	1	0.70	It is assumed that: - An analysis of the transportation demand and usage patterns for the building has been carried out to determine the optimum number and size of transport systems. - The energy consumption has been calculated in accordance with BS EN ISO 25745 Part 2. - The analysis includes one of the following: At least two types of system; An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less); or A system strategy which is 'fit for purpose'. - The use of regenerative drives should be considered, where it produces an energy saving greater than the additional standby energy used to support it - The transportation system with the lowest energy consumption is specified.	1	Medium	Lift Manufacturer / HG

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 3-4	Energy Efficient Features (Lifts)	1	0.70	It is assumed for each lift, the following three energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting & display lighting provides an average lamp efficacy, (across all fittings in the car) of > 70 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.	1	Medium	Lift Manufacturer / HG
Ene08	**Energy Efficient Equipment**						
	Energy Efficient Equipment	2	0.70	It is assumed that:- The building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption is estimated. Examples of significant contributors are:Swimming PoolLaundry Facilities with Commercial size AppliancesData CentresIT Intensive areasDomestic Scale White GoodsHealthcareKitchen & Catering facilities.- For the systems/ processes that use a significant proportion of the total annual unregulated energy consumption , demonstrate a meaningful reduction in the total annual unregulated energy consumption by design, specification or operation.	0	Possible	Client
TRANSPORT							
Tra01	**Transport Assessment and Travel Plan**						
	Travel Plan	2	0.83	During Concept Design Stage **(RIBA Stage 2)** a draft travel plan needs to be created based on a site specific travel assessment. Note that all the points under criterion 2 need to be covered as minimum, including Accessibility Index and Local Amenities - see BREEAM 2018 NC Manual for more details. The travel plan includes proposals to increase or improve sustainable modes of transport and movement of people and goods during the building operation and use. The travel plan is implemented post construction and supported by the building's management in operations.	2	Medium	Transport consulatant
Tra02	**Sustainable Transport Measures**						
Req 1	Pre-requisite			Produce a Tra 01 compliant travel plan during **design stage**. This is a prerequisite to the following credits being awarded.		Medium	
Req 2	Sustainable Transport Measures	10	0.83	It is assumed that 4**no points** will be achieved by implementing Sustainable Transport Measures as per Table 7.4 within the BREEAM Manual. The points are awarded for each of the items below: - Accessibility Index of I > 8 (30.42 achieved) **(1 point)** - location of core amenities **(1 point)** **- ensure a minimum of 1no new accessible amenities (roof terraces as outside space) (2 points)**	6	Low	TGC
WATER							
Wat01	**Water Consumption**			**Minimum Standard: One credit for Good and above, Two credits for Outstanding**			
	Water Consumption	5	0.78	It is assumed that a **25**% improvement in water consumption over the notional baseline will be achieved. This would broadly equate to - WC's - 4.5l flush or better WHB taps - 5l/min or better Urinals - 4.5 Litres/bowl/hr Showers - 10l/min or better Baths - 80 litres Kitchenette taps - 5l/min Pre-rinse nozzle - 5l/min Commercial sized dishwashers (if present) - 15l/cycle Commercial sized washing machines - 15l/kg	2	Medium	M&E
Wat02	**Water Monitoring**			**Minimum Standard: Criterion 1 for Good and above**			
Req 1	Water Sub Meters			The main supply to the building will be fitted with a pulsed water meter.		Low	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 2-6	Water Sub Meters	1	0.78	The main supply to the building will be fitted with a pulsed water meter. Additionally: - Sub-meters will be provided for any water consuming plant or building areas consuming 10% or more of the building's total water consumption . - Each water meter will have a pulsed output for connection to a BMS. - The sub meters are connected to any existing or proposed BMS - Sub meters are fitted to large water tanks separate to associated changing areas and sanitary areas irrespective of their water consumption levels. This will include water meter requirement under laundry facilities	1	Low	M&E
Wat03	**Water Leak Detection and Prevention**						
Req 1-2	Leak Detection System	1	0.78	It is assumed that a BREEAM compliant leak detection system will be specified or installed on the buildings water supply.	1	Low	M&E
Req 3	Flow Control Devices	1	0.78	It is assumed that flow control devices that regulate the water supply to the WC areas or sanitary facility according to demand will be installed, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework. Compliance with criterion 3 for WC facilities in hotel rooms can be achieved through providing the required flow control devices to groups of 10 rooms, rather than to each individual room. The devices should be installed on the cold water supply to taps and WCs but must not allow the CWS to automatically switch off in showers while hot water is still running.	1	Medium	M&E
Wat04	**Water Efficient Equipment**						
	Water Efficient Equipment	1	0.78	It is assumed that the design team has identified all unregulated water demands that could be realistically mitigated or reduced. System(s) or processes have been identified to reduce the unregulated water demand a meaningful reduction in the total water demand of the building can be demonstrated. Some examples would be: 1. Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage, i.e. grey water collection from building functions or processes that use potable water, e.g. vehicle wash, training water in fire stations, sanitary facilities, irrigation etc. 2. External landscaping and planting that relies solely on precipitation, during all seasons of the year.	1	Medium	Landscape
MATERIALS							
Mat01	**Environmental impacts from construction products -Building life cycle assessment (LCA)**						
Req 3-5	Superstructure	6	1.07	It is assumed that: - An IMPACT compliant / equivalent Life Cycle Assessment (LCA) carried out at **RIBA Stage 2**, considering LCA options for 4 substantially different superstructure elements. - This is followed by a **RIBA Stage 4** more detailed LCA review on a further 3 options based on the Stage 2 choice. - The Mat 01 calculator will need to be submitted to BRE at **Stage 2 & 4**. - The options appraisal and modelling needs to be integrated into the design process LCA Stage 2 modelling and optioneering carried out with input from team, and data submitted to the BRE prior to planning	6	Medium	LCA Consultant
Req 6-7	Substructure and Hard Landscaping Options Appraisal	1	1.07	It is assumed that: - An IMPACT compliant / equivalent Life Cycle Assessment (LCA) will be carried out at **RIBA Stage 2** and will consider LCA options for 6 substantially different substructure or hard landscaping elements (at least 2 being sub structure and 2 being hard landscaping). - The Mat 01 calculator will need to be submitted to BRE at **Stage 2**. LCA Stage 2 modelling and optioneering carried out with input from team, and data submitted to the BRE prior to planning	1	Medium	LCA Consultant
Mat02	**Environmental impacts from construction products -Environmental Product Declarations (EPD)**						
	Specification of products with EPDs	1	1.07	It is assumed that there will **not** be sufficient construction products specified with an Environmental Product Declaration (EPD) to achieve a total EPD points score of at least 20. See BREEAM manual for further details.	0	Possible	CGT
Mat03	**Responsible Sourcing**			**Minimum standard: Req 1 for all BREEAM assessments**			
Req 1	Pre Requisite			All timber used within the project will be legally harvested and traded timber.		Low	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 2	Enabling Sustainable Procurement	1	1.07	It is assumed that a sustainable procurement plan was used by the design team to guide specification towards sustainable construction products before **Concept Design (i.e. during RIBA Stage 1).**	1	Low	Client
Req 3	Measuring Responsible Sourcing	3	1.07	It is assumed that materials will be sourced suppliers with appropriate responsible sourcing certification (e.g. BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.). 2 credits are currently targeted, requiring 20% of available points to be achieved for superstructure, substructure , hard landscaping and finishes.	2	Medium	Contractor
Mat05	**Designing for Durability and Resilience**						
	Protecting vulnerable parts of the building from damage	1	1.07	It is assumed that the building will be designed to incorporate suitable durability / protection measures / designed features / solutions to prevent damage to vulnerable parts of the internal & external building & landscaping, including: - Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). - Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. - Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring - Protection from malicious damage to building materials and finishes, in public and common areas where appropriate.	1	Medium	CGT
	Protecting exposed parts of the building from material degradation			It is assumed that: a) key exposed building elements will be designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through either: the element or product achieving an appropriate quality or durability standard or design guide, see Table 9.14 in BREEAM V6 Manual for more details. OR by carrying out a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. b) the building includes convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design. c) the roof and façade will be designed to prevent water damage, ingress and detrimental ponding.		Medium	CGT
Mat06	**Material Efficiency**						
	Material Efficiency	1	1.07	As no action was undertaken at Stage 1, the full requirements at **all** RIBA stages have **not** been met in order for this credit to be targeted.	0		
WASTE							
Wst01	**Construction Site Waste Management**			**Minimum standard: One Credit for Outstanding**			
Req 1-2	Pre-demolition audit	1	0.60	It is assumed that this credit cannot be targeted as it is expected that a compliant audit will not be conducted at a suitably early stage (**During Stage 2**) - Pre-demoliton audit commissioned	1	High	Contractor
Req 3-4	Construction Resource Efficiency	3	0.60	It is assumed that: - Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction. The RMP also covers accurate data records on waste arisings and waste management routes. - **One credit**: less than 13.3m³ or 11.1 tonnes of non-hazardous construction waste generated per 100m² GIFA. RMP being produced	1	High	Contractor
Req 5-6	Diversion of resources from Landfill	1	0.60	It is assumed that the following percentages of non-hazardous construction (on-site and off-site manufacture / fabrication in a dedicated facility), demolition waste generated by the project have been diverted from landfill: - Non Demolition - 70% by Volume or 80% by tonnage - Demolition - 80% by Volume or 90% by tonnage	1	High	Contractor
Wst02	**Use of Recycled and Sustainably Sourced Aggregates**						
Req 1	Pre-requisite			If demolition occurs on site, to encourage the reuse of site-won material on site, complete a Pre-Demolition Audit of any existing buildings, structures or hard surfaces		Low	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 2-6	Project Sustainable Aggregate Points	1	0.60	Achieve at least 3.5 points using the Wst 02 calculator, based on: - Identifing all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0	Possible	Contractor
Wst03	**Operational Waste**			**Minimum standard: One Credit for Excellent & Outstanding**			
Req 1	Dedicated space for recyclables	1	0.60	It is assumed that a dedicated recycling area, adequately sized to serve the development and accessible to building occupiers and waste contractors will be provided. This space will be sized to meet the client's requirements (as a guide 2m² per 1000m² net floor area). This space will be 2m² per 1000m² net floor area of internal space, with an extra 2m² per 1000m² floor area where catering is provided. Please note that the floor area should be rounded up.	1	High	CGL / Client
Req 2	Compactor / Baler / Composting			Where relevant: It is assumed that a static compactor / baler will be provided in a dedicated waste management space AND a compliant vessel for composting organic waste will be provided.			
Wst05	**Adaptation to Climate Change**						
	Resilience of structure, fabric, building services and renewables installation	1	0.60	Conduct a Climate Change Adaptation Strategy Appraisal using: 1. A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes: - Hazard identification - Hazard assessment - Risk estimation - Risk evaluation - Risk management 2. Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during **RIBA Stage 2**, that aim to mitigate the identified impact. 3. Provide an update during **RIBA Stage 4** demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor.	1	Medium	CGL / M&E / Structures
Wst06	**Design for Disassembly and Adaptability**						
Req 1-2	Design for disassembly and adaptability - Recommendations	1	0.60	It is assumed that: 1. A study was conducted to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of **RIBA Stage 2**. See full credit guidance within BREEAM V6 manual for the minimum considerations within the report. 2. Recommendations or solutions were developed based on the study during or prior to **RIBA Stage 2** that aim to enable and facilitate disassembly and functional adaptation.	1	Medium	CGL / M&E / Structures
Req 3-5	Design for disassembly and adaptability - Implementation	1	0.60	**I**t is assumed that: 1. The above credit is achieved. 2. An update is provided during RIBA Stage 3/4 on: - How the recommendations or solutions proposed by Concept Design **(RIBA Stage 2)** have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. - Changes to the recommendations / solutions during the development of **Stage 4.** 3. A building adaptability and disassembly guide will be produced to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1		CGL / M&E / Structures
LAND USE & ECOLOGY							
LE01	**Site Selection**						
Req 1	Previously Developed land	1	1.00	It is assumed that **at least** 75% of the development's footprint (including building, hard landscaping, and temporary works) is on previously developed land.	1	Low	CGL / MC
Req 2-3	Contaminated land	1	1.00	It is **unlikely** that the site can be classed as contaminated or requiring remediation to enable development.	0	Possible	Savills / Client

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
LE02	**Identifying and understanding the risks and opportunities for the project**						
Req 1	Pre-requisite			It is assumed that the client or contractor will confirm compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.		High	Ecologist
Req 2-5	Ecological Survey & Evaluation	1	1.00	It is assumed that a Suitably Qualified Ecologist will be appointed at a project stage that ensures early involvement in site configuration & can influence planning decisions AND prior to planning application (ideally **RIBA Stage 1/2)**, an appropriate level of survey and evaluation has been carried out to determine the ecological baseline of the site, taking account of the zone of influence to establish: - Current and potential ecological value and condition of the site, and related areas within the zone of influence. - Direct and indirect risks to current ecological value - Capacity and feasibility for enhancement of the ecological value of the site Data are collated and shared with project team to inform the site preparation, design or construction works.	1	High	Ecologist
Req 6-10	Determining Ecological Outcome	1	1.00	During Stage 2, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites (appropriate to the scale and type of development) for the project, taking into account the Route 2 hierarchy of actions listed in the table in the BREEAM v6 Manual.The optimal ecological outcome for the site is selected after liaising with representative stakeholders and the project team.	1	High	Project Team / Ecologist
LE03	**Managing negative impacts on ecology**						
Req 1	Pre-requisite			It is assumed that LE02 is achieved. It is assumed that the client or contractor will confirm that compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.		High	Project Team / Ecologist
Req 2-4	Planning, Liaison, Implementation & Data	1	1.00	It is assumed that the pre-requisite has been met and it is assumed that roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief (via Environmental Workshop meetings). Site preparation and construction works should have been planned for and are implemented at an early project stage to optimise benefits and outputs. The project team has been liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions, and measures have been selected, during site preparation and construction works.	1	High	Project Team / Ecologist
Req 7-8 (Route 2)	Managing negative impacts of the project	2	1.00	To achieve this credit, criteria 2-4 (above) must be achieved, negative impacts from site preparation and construction works must be managed according to the BREEAM hierarchy and the SQE confirms no loss of ecological value has occurred.	1	High	Ecologist
LE04	**Change and Enhancement of Ecological Value**						
Req 1-2	Pre-requisite			It is assumed that: - Negative impacts from site preparation and construction works have been managed according to the BREEAM hierarchy and the SQE confirms no loss of ecological value has occurred of where this is not possible, the loss of ecological value has been minimised. -The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.		High	Ecologist
Req 5 (Route 2)	Liaison, implementation and data collation	1	1.00	It is assumed the project team have been liaising and collaborating with representative internal & external stakeholders, taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value in the following order: - On site, and where this is not feasible, - Off site within the zone of influence. Where data is collected and potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site.	1	High	Project Team / Ecologist

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Req 6 (Route 2)	Enhancement of ecology	3	1.00	It is assumed that a calculation of the change in ecological value occurring as a result of the project based on the process set out in GN36 using the BREEAM LE04 calculator	1	High	Ecologist
LE05	**Long Term Ecology Management and Maintenance**						
Req 1-2	Pre-requisite			It is assumed that: -The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. - Negative impacts from site preparation and construction works have been managed according to the BREEAM hierarchy and that the SQE confirms no loss of ecological value has occurred. -At least one credit under LE04 req 6 is achieved		High	Ecologist
Req 3-5	Management and maintenance throughout the project	1	1.00	It is assumed that the ecological outcomes defined in LE 02,03 & 04 will be monitored and the effectiveness of the mitigation and enhancement measures will be reviewed to ensure they are implemented. Management throughout the project should include the following: - Monitoring and reporting of outcomes and successes from the project. - Arrangements for ongoing management of landscape and habitat connected to the project (on and, where relevant, off site). - Maintaining ecological value of the site & relationship/connection to its zone of influence - Maintaining site in line with the any sustainability activities, e.g. ecosystems benefits (LE 02). A section on Ecology and Biodiversity will be included as part of the building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. This should include detailed management and maintenance plans as required by landscape and asset managers as well as relevant parts of the handover information for occupiers written in a format that encourages understanding and supportive behaviours.	1	High	Project Team / Ecologist
Req6-7	Landscape and ecology management plan	1	1.00	It is assumed that a landscape and ecology management plan, or similar, will be developed in accordance with BS 42020:2013 section 11.1 covering at least the first five years after project completion & includes: - Actions and responsibilities, prior to handover, to give to relevant individuals - The ecological value and condition of the site at handover and how this is expected to develop and change over time - Identification of opportunities for ongoing alignment with activities external to the development project & which supports the aims of BREEAM's Strategic Ecology Framework - Identification and guidance to trigger appropriate remedial actions to address previously unforeseen impacts - Clearly defined and allocated roles and responsibilities. The landscape and management plan or similar is updated as appropriate to support maintenance of the ecological value of the site.	1	High	Project Team / Ecologist
POLLUTION							
Pol01	**Impact of Refrigerants**						
Req 2	Buildings With Refrigerants Prerequisite			It is assumed that: All systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.		Possible	M&E / M&E Sub
Req 3-5	Impact of Refrigerant	2	0.67	It is currently assumed that the refrigerants specified will **not** achieve Direct Effect Life Cycle CO^2 equivalent emissions of ≤1000kg CO2e/kW cooling capacity.(note: both credits can be achieved if systems with refrigerants having GWP<10 can be specified)	0	Possible	M&E / M&E Sub
Req 6-7	Leak Detection System	1	0.67	It is assumed that the refrigerant systems will **not** have either hermetically sealed construction or BREEAM compliant refrigerant leak detection	0	Possible	M&E / M&E Sub
Pol02	**Local Air Quality**						
	Local Air Quality	2	0.67	**It is assumed that either all hot water and heating is supplied by non-combustion systems e.g. powered by electricity** OR that the emissions do not exceed the levels in table 12.4 of the BREEAM V6 NC Manual (e.g. 24 mg/kWh for gas boilers)	2	Low	M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Pol03	**Flood and Surface Water Management**						
Req 1	Pre-requisite			An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with all the criteria.		Low	Drainage Consultant
Req 2	Low Flood Risk	2	0.67	It is assumed that a site specific Flood Risk Assessment will be produced which confirms that the building is situated in a **low flood risk** area for all of the following: - Fluvial - Tidal - Surface Water - Groundwater - Sewers - Reservoirs, canals or other artificial sources.	2	Medium	
Req 5	Pre-requisite			Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site.		Low	Drainage Consultant
Req 6-8	Surface Water Run-Off - Rate	1	0.67	It is assumed that: - Drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) shows, where brownfield, a 30% improvement for developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. - Calculations include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	1	High	
Req 9-15	Surface Water Run-Off - Volume	1	0.67	It is assumed that : - Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); - Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for 100-year 6-hour event, including climate change. - Where the above volume requirement is not achievable, justification from the Appropriate Consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. - Drainage design measures are specified to ensure the post development peak rate is reduced to the limiting discharge. This is defined as the highest flow rate from the following options: **a**. The pre-development 1-year peak flow rate; **b**. The mean annual flow rate Qbar; **c**. 2L/s/ha. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. - For either option above, calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	1	High	Drainage Consultant
Req 17-24	Minimising water course pollution	1	0.67	It is assumed that: - A suitably qualified professional will confirm that there will be no discharge from the site for up to 5mm of rainfall. - In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. - Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators installed in surface water drainage systems. - Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system. - All water pollution prevention systems have been designed and installed in accordance with therecommendations of documents such as the SuDS manual and other relevant industry best practice. - A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. - Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place. - All external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance.	0	Possible	Drainage Consultant

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Pol04	**Reduction of Night Time Light Pollution**						
	Reduction of Night Time Light Pollution	1	0.67	It is assumed that **all** of the external lighting within the construction zone complies with the following: - Complies with Table 2 of the ILP Guidance notes for the reduction of obtrusive light, 2011 - All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. - Any safety or security lighting which is used between 23:00 & 07:00, complies with the lower levels of lighting recommended in Table 2 of the ILP's Guidance notes. - Illuminated advertisements must be designed in compliance with ILP PLG05.	1	Medium	M&E / M&E Sub
Pol05	**Reduction of Noise Pollution**						
	Reduction of Noise Pollution	1	0.67	It is assumed that: - A noise impact assessment in compliance with BS 4142:2014 will be carried out by a suitably qualified acoustician and the following noise levels measured/determined: i. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. ii. The rating noise level resulting from the new noise source. - The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development must be at least 5dB lower than the background noise throughout the day and night. - Where the noise source(s) from the proposed site/building is greater than above, measures have been installed to attenuate the noise at its source to a level where it will comply with the above.	1	Low	Acoustician / M&E
INNOVATION CREDITS							
Man 03 Req 23	Responsible Construction Management	1	1.00	It is assumed that the project will achieve at least a score of **39** overall on CCS, with no section scoring under **13** points AND achieve additional requrements	0	Possible	Main Contractor
Hea 01 Req 15	Daylighting	1	1.00	The relevant building areas are **unlikely to meet the exemplary** daylighting criteria as per Table 5.8 or Table 5.9 within the BREEAM 2018 Manual.	0		
Hea 01 Req 16	Internal and External Lighting Zones & Controls	1	1.00	It is assumed that lighting in each zone **cannot** be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. This credit is to be reviewed as the design develops. If sought, dimming and control gear should avoid flicker and noise.	0		
Hea 02 Req 11	Minimising sources of air pollution	1	1.00	**Less than** Three of the product types listed meet the emission limits, testing requirements and any additional requirements listed in Table 5.12. Where wood-based products are not one of the three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.	0		
Hea 06 Req 4	Security of Site and Building	1	1.00	A compliant risk based security assessment scheme has **NOT** been used. The performance against the scheme has been confirmed by independent assessment and verification. Note that SABRE is currently the only BRE recognised scheme.	0		
Ene 01 Req 6-7	Beyond Zero Net Regulated Carbon	2	1.00	Building **is unlikely to** achieve EPR of at least 0.9 and zero net regulated carbon emissions & energy generation from on-site and near-site LZC sources offsets carbon emissions from regulated energy use plus unregulated energy use **is unlikely to exceed 10% or achieve 50%**	0		
Ene 01 Req 9	Carbon Negative Req 9	1	1.00	**<100%** carbon emissions from unregulated (and regulated) energy use are offset by energy generated from off-site and near-site LZC sources.	0		
Ene 01 Req 10-12	Post Occupancy Stage	2	1.00	Funds are **NOT currently** committed to pay for the post occupancy stage BREEAM Certification. An assessor **is not** appointed to report on the actual energy consumption compared with targets set. Energy model is **not** submitted to the BRE & retained by the building owner. This credit requires maximum available credits in Ene 02 and operational energy 4 credits to be achieved.	0		
Wat 01 Req 7-8	Water Consumption	1	1.00	It is assumed that the building will **not** achieve a reduction in water consumption by 65% over the notional baseline.	0		
Mat01 Req 8-9	LCA -Core Building Services Options	1	1.00	It is assumed that LCA options appraisal is **NOT** completed for 3 significantly different core building services options using a recognised LCA tool during Concept Design & tool is submitted to BRE	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information Full details available at - https://www.breeam.com/NC2018/	Target for Excellent	Risk	Responsibility
Mat01 Req 11-14	LCA & LCC Alignment	1	1.00	It is assumed that the following will be be achieved: - LCA credits for superstructure @ **Concept & Technical Design** stages achieved. - Elemental LCC plan and Component Level LCC options appraisal credits (Man 02 Life cycle cost and service life planning on page 45) achieved. - Integrate the aligned LCA and LCC options appraisal activity within the wider design decision-making process - Record results in an Options Appraisal Summary Report.	1	**Medium**	**Project Team**
Mat01 Req 15-18	LCA - Third party verification	1	1.00	It is assumed that: - LCA credits for superstructure @ **Concept & Technical Design** Stages - LCA credits for Substructure & landscaping options have been achieved. - A suitably qualified third party either carries out the building LCA work or verifies the building LCA work (if by others), and produces a report describing how they have checked the building LCA work accurately represent the designs under consideration during **Concept Design** and **Technical Design** with reference to the requirements of all relevant BREEAM criteria.	1	**Medium**	**Project Team**
Mat 03 Req 3	Measuring Responsible Sourcing	1	1.00	It is assumed that using the manufacturers with appropriate responsible sourcing certification for Superstructure, internal finishes, substructure, hard landscaping and core building services <50% of available points will be achieved	0		
Wst 01 Req 3-4	Construction Waste Management	1	1.00	As per criteria for Wst 01 Construction Resource Efficiency and Diversion of Resources from Landfill, the following benchmarks are achieved: -Non hazardous construction waste will **NOT** be less than 1.6m³ / 1.9 tonnes per 100m². -Diversion from landfill targets **may not** be met for Non Demolition & Demolition (85% by Volume or 90% by tonnage) & Excavation(95% by Volume or 90% by tonnage) -Additionally all key waste groups in Table 10.3 for diversion from landfill are covered in the RMP. Waste data obtained from licensed external waste contractors is reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company.	0		
Wst 02 Req 7	Project Sustainable Aggregate Points	1	1.00	Achieve **less than** 6 points using the Wst 02 calculator, based on: - Identifying all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0		
Wst 05 Req 4-5	Responding to Climate Change	1	1.00	**Not ALL** of the following credits are achieved: - Hea 04 - Criterion 6 - Ene 01 - 6 credits - Ene 04 - Passive Design Analysis credit - Wat 01 - 3 credits - Mat 05 - Criteria 2-4 - Wst 05 - Req 1-3 (full credit) - Pol 03 - 1 credit for flood resilience plus 2 credits for surface water run-off	0		
LE 02 Req 11-13	Determine the Ecological Outcomes for the Site	2	1.00	When determining the optimal ecological outcome for the site, sustainability-related activities and the potential for ecosystem service related benefits for the wider site will **NOT necessarily** be considered. And **not** all of the following credits will be achieved: **Hea 07** - Safe Access ; **Hea 07** - Outdoor Space; **Pol 03** - Surface water run-off & minimising water course pollution; **Pol 05** - Reduction of Noise Pollution	0		
LE 04 Req 13	Enhancing Ecology	1	1.00	It is assumed a biodiversity change of at least 110% is **not** achieved	0		
Unlisted, BRE Approved Innovations		10	1.00	**No unlisted innovation credits will be sought**	0		

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